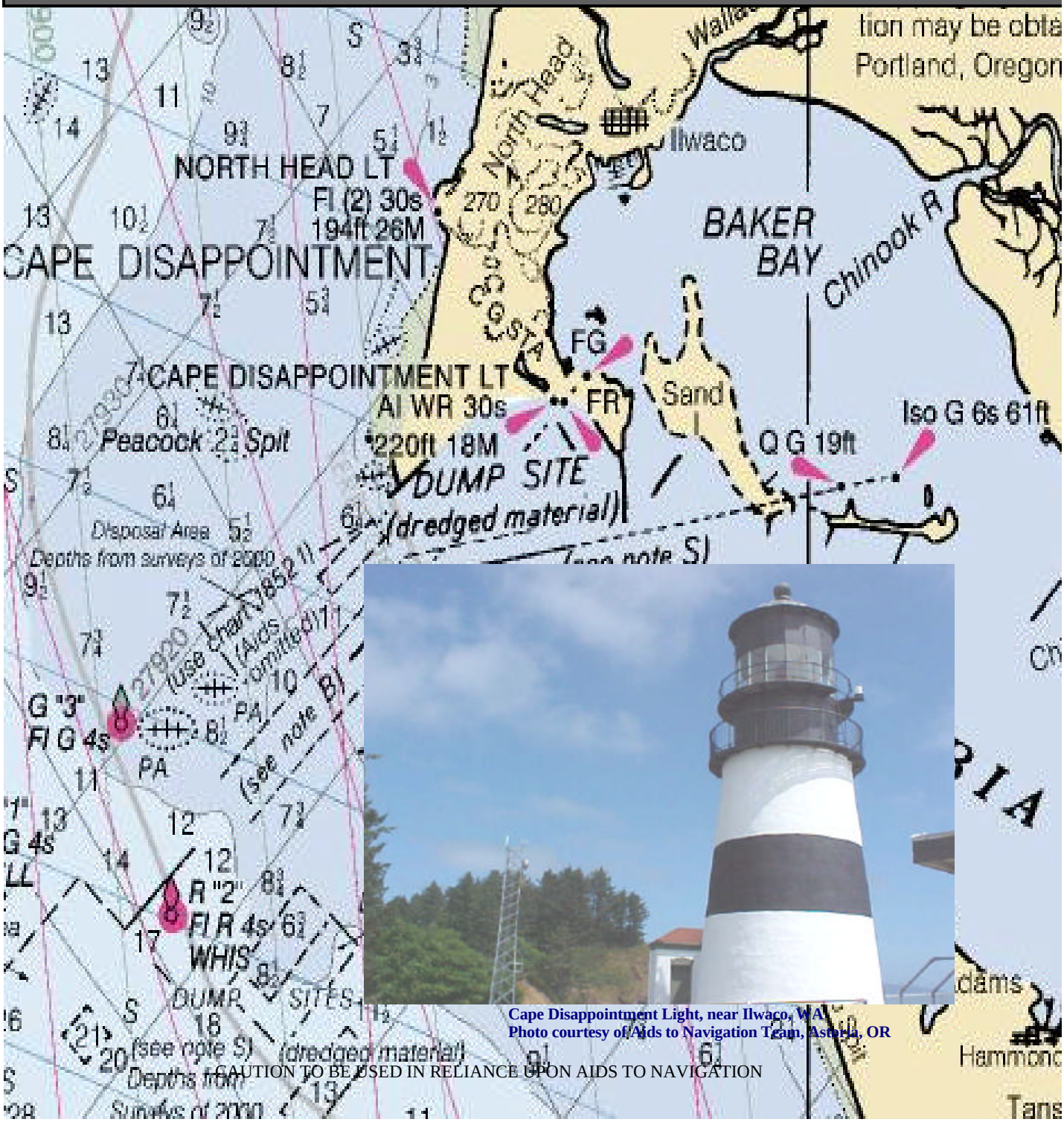
THIRTEENTH COAST GUARD DISTRICT

2002 SPECIAL NOTICE TO MARINERS



Cape Disappointment Light, near Ilwaco, WA
Photo courtesy of Aids to Navigation Team, Astoria, OR

CAUTION TO BE USED IN RELIANCE UPON AIDS TO NAVIGATION

THE AIDS TO NAVIGATION DEPICTED ON CHARTS COMPRISE A SYSTEM OF FIXED AND FLOATING AIDS TO NAVIGATION WITH VARYING DEGREES OF RELIABILITY. THEREFORE, PRUDENT MARINERS WILL NOT RELY SOLELY ON ANY SINGLE AID TO NAVIGATION, PARTICULARLY A FLOATING AID TO NAVIGATION. WITH RESPECT TO BUOYS, THE BUOY SYMBOL IS USED TO INDICATE THE APPROXIMATE POSITION OF THE BUOY BODY AND THE SINKER WHICH SECURES THE BUOY TO THE SEABED. THE APPROXIMATE POSITION IS USED BECAUSE OF THE PRACTICAL LIMITATIONS IN POSITIONING AND MAINTAINING BUOYS AND THEIR SINKERS IN PRECISE GEOGRAPHICAL LOCATIONS. THESE LIMITATIONS INCLUDE, BUT ARE NOT LIMITED TO, INHERENT IMPRECISIONS IN POSITION FIXING METHODS, PREVAILING ATMOSPHERIC AND SEA CONDITIONS, THE SLOPE OF AND THE MATERIAL MAKING UP THE SEABED, THE FACT THAT BUOYS ARE MOORED TO SINKERS BY VARYING LENGTH OF CHAIN, AND THE FACT THAT THE BUOY BODY AND/OR SINKER POSITIONS ARE NOT UNDER CONTINUOUS SURVEILLANCE BUT ARE NORMALLY CHECKED ONLY DURING PERIODIC MAINTENANCE VISITS WHICH OFTEN OCCUR MORE THAN A YEAR APART. DUE TO THE FORCES OF NATURE, THE POSITION OF THE BUOY BODY CAN BE EXPECTED TO SHIFT INSIDE AND OUTSIDE THE CHARTED SYMBOL. THE MARINER IS ALSO CAUTIONED THAT BUOYS MAY BE EXTINGUISHED OR SOUND SIGNALS MAY NOT FUNCTION AS THE RESULT OF ICE, RUNNING ICE, OR OTHER NATURAL CAUSES, COLLISIONS, OR OTHER ACCIDENTS. FOR THE FOREGOING REASONS, A PRUDENT MARINER MUST NOT RELY COMPLETELY UPON THE POSITION OR OPERATION OF FLOATING AIDS TO NAVIGATION, BUT WILL ALSO UTILIZE BEARINGS FROM FIXED OBJECTS AND AIDS TO NAVIGATION ON SHORE. FURTHER, A VESSEL ATTEMPTING TO PASS CLOSE ABOARD ALWAYS RISKS COLLISION WITH A YAWING BUOY OR WITH THE OBSTRUCTION THAT THE BUOY MARKS.

CODE OF FEDERAL REGULATIONS

TITLE 33--NAVIGATION AND NAVIGABLE WATERS
CHAPTER I--COAST GUARD, DEPARTMENT OF TRANSPORTATION
PART 62--UNITED STATES AIDS TO NAVIGATION SYSTEM--Table of Contents
Subpart D--Public Participation in the Aids to Navigation System

Sec. 62.63 Recommendations.

(a) The public may recommend changes to existing aids to navigation, request new aids or the discontinuation of existing aids, and report aids no longer necessary for maritime safety. These recommendations should be sent to the appropriate District Commander.

(b) Recommendations, requests and reports should be documented with as much information as possible to justify the proposed action. Desirable information includes:

(1) Nature of the vessels which transit the area(s) in the question, including type, displacement, draft, and number of passengers and crew.

(2) Where practicable, the kinds of navigating devices used aboard such vessels (e.g, magnetic or gyro compasses, radio direction finders, radar, loran, and searchlights).

(3) A chartlet or sketch describing the actual or proposed location of the aid(s), and a description of the action requested or recommended.

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Sec. 62.65 Procedure for reporting defects and discrepancies.

(a) Mariners should notify the nearest Coast Guard facility immediately of any observed aids to navigation defects or discrepancies.

(b) The Coast Guard cannot monitor the many thousands of aids in the U.S. Aids to Navigation System simultaneously and continuously. As a result, it is not possible to maintain every aid operating properly and on its charted position at all times. Marine safety will be enhanced if persons finding aids missing, sunk, capsized, damaged, off station, or showing characteristics other than those advertised in the Light List, or other publication, promptly inform the Coast Guard. When making the report to the Coast Guard the mariner should consult the Light List to ensure the correct geographical information is used due to the similarity of names and geographical areas.

(c) Procedures for reporting defects and discrepancies:

(1) Radio messages should be prefixed ``Coast Guard'' and transmitted directly to a Government shore radio station listed in Chapter three of Radio Navigation Aids Publication, 117, for relay to the relevant District Commander.

(2) Commercial communications facilities should be used only when vessels are unable to contact a Government shore radio station. Charges for these messages will be accepted ``collect'' by the Coast Guard.

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CHAPTER I

EMERGENCY PROCEDURES

INTERNATIONAL DISTRESS SIGNALS

All seamen should be familiar with the International Distress Signals and procedures, for recognition, self-reliance or in the event of distress where the captain and officers may have been incapacitated. Short-range distress signals, limited in range of visibility or audibility are:

1. "SOS" (··· --- ···) signal made by audio or visual means.
2. International Flag Code "NC" (flag hoist).
3. Hoisting any square flag with a ball, or anything resembling a ball, above or below it.
4. Flames made visible (as burning oil in a barrel).
5. A rocket parachute flare or hand held flare showing a red light.
6. Rockets or shells, throwing red stars, fired one at a time in short intervals.
7. Orange smoke as emitted from a distress flare.
8. A gun or other explosive device fired at about one minute intervals.
9. Continuous sounding of any fog signal device.
10. Slowly and repeatedly raising and lowering arms outstretched to each side
11. (EPIRBs) signals transmitted by emergency position indicating radiobeacons.
12. A signal sent by radiotelephone consisting of the spoken word "MAYDAY".
13. Radiotelegraph alarm signal.
14. Radiotelephone alarm signal. A high intensity white light flashing at regular intervals from 50 to 70 times per minute (Inland Waters only).

The preceding distress signals are contained in the NAVIGATION RULES (COMDTINST M16672.2) Rule 37 and described in Annex IV.

RENDERING OF ASSISTANCE

The master or person in charge of a vessel is obligated by law to provide whatever assistance can be safely provided to any individual at sea in danger of being lost, and is subject to a fine and/or imprisonment for failure to do so (Title 46 USC 2304).

RADIOTELEPHONE (VOICE) DISTRESS MESSAGE

Periodically, mariners in distress or having knowledge of another vessel in distress do not give all the information required by the International Radio Regulations and by the Federal Communications Commission. This often makes it impractical to start a search and could very well lead to loss of life. Use of proper format is a vital issue in the transmission of marine distress messages. The urgency of the situation places a premium on brevity and clarity. The Coast Guard strongly recommends that the distress message format and transmission procedures be learned by all mariners.

1. SPEAK SLOWLY AND CLEARLY: If you are in DISTRESS (i.e.: when threatened by grave and imminent danger) transmit the International Distress Call on either 2182 kHz or channel 16 VHF-FM (156.8 MHz) - MAYDAY MAYDAY MAYDAY THIS IS (your vessel's call sign and name repeated not more than THREE times). If you need information or assistance from the Coast Guard (other than in a distress) call COAST GUARD on either 2182 kHz or channel 16 VHF-FM (156.8 MHz) (the DISTRESS and CALLING FREQUENCIES). In this situation, you will normally be shifted to a common working frequency allowing the DISTRESS frequencies to remain open. The Radiotelephone Alarm Signal on 2182, if available, should be transmitted prior to the DISTRESS CALL for approximately one minute. The Radiotelephone Alarm Signal consists of two audio tones, of different pitch, transmitted alternately. Its purpose is to attract the attention of persons on radio watch and shall only be used to announce that a distress call or message is about to follow.

2. IF ABOARD A VESSEL IN TROUBLE - PROVIDE:

    a. WHO you are (your vessel's name and call sign).
    b. WHERE you are (your vessel's position in latitude/longitude or true bearing and distance in nautical miles from a widely known geographical point or LORAN readings if available; local names known only in the immediate vicinity are confusing).
    c. WHAT is wrong (nature of distress or difficulty).
    d. Number of persons aboard and the condition of any injured
    e. Kind of assistance desired.
    f. Do all persons aboard have personal flotation devices?
    g. Present seaworthiness of your vessel (leaking, flooded, etc.).
    h. Description of your vessel - length, type, cabin, masts, power, color of hull, superstructure and trim
    i. Your listening frequency and schedule.

3. IF OBSERVING ANOTHER VESSEL IN DIFFICULTY - PROVIDE:

   a. Your position, and (if possible) the bearing and distance or GPS/LORAN readings if available of the vessel in difficulty.
   b. Nature of distress or difficulty.
   c. Description of the vessel in distress or difficulty.
   d. Your intentions, course, and speed, etc.
   e. Your radio call sign, name of your vessel, listening frequency and schedule.

The Distress Call has absolute priority over all other transmissions and shall not be addressed to any particular station. Any mariner hearing a Distress Call shall immediately cease all transmissions capable of interfering with the distress message and shall continue to listen on the frequency which the call was heard. If your vessel is in distress and abandonment is necessary the radio transmitter should be set for continuous emission if possible, to provide rescue vessels and aircraft with a homing signal.

DO NOT USE MAYDAY TO REPORT THAT YOUR VESSEL IS OUT OF GAS, LOST, OR HAVING ENGINE TROUBLE UNLESS YOU ARE IN IMMEDIATE DANGER.

4. IF YOU HAVE A MEDICAL CASE - SEND:

   a. Name of vessel and/or call sign.
   b. Position.
   c. Patient's name and age.
   d. Nature of problem (symptoms, locations of pain or injury).
   e. Is patient conscious?
   f. Is patient ambulatory (able to walk)?
   g. Patient's temperature and pulse. Difficulty breathing?
   h. Is patient bleeding? Is the bleeding controlled?
   i. Duration of pain.
   j. Previous similar episode (if yes, treatment and diagnosis).
   k. Medicine taken and medicine available.
   l. Private physician's name and phone number.

5. RADIOTELEGRAPH DISTRESS SIGNAL

   a. Trip the radiotelegraph alarm signal (if available).
   b. Set equipment to frequency 500 kHz and transmit the morse code "SOS", followed by long dash or steady key (5-10 seconds), for direction finding.

Since radiotelegraph communications require familiarity with Morse code, the most that can be accomplished would be to enable other ships or shore stations to take a radio bearing on the vessel in distress. "Simple to follow" instructions for the operation of auto-alarms, radiotelephone and radiotelegraph equipment should be conspicuously placed in the radio rooms of all ships. Procedures outlined here are purposely brief. Complete information on emergency radio procedures is contained in chapter 5 of the Radio Navigational Aids (Pub 117A & B).

6. RADIOTELEPHONE URGENT CALLS

The radiotelephone Urgent Signal consists of three repetitions of the word PAN-PAN (rhymes with DAWN). The signal indicates that the calling station has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or the safety of a person.

7. RADIOTELEPHONE SAFETY CALLS

The radiotelephone Safety Signal consists of the word SECURITE (pronounced SECURITAY) spoken three times. This signal indicates that the station is about to transmit a message concerning the safety of navigation or giving important weather warnings. The safety call is transmitted on 156.8 MHz (VHF-FM Channel 16) or 2182 kHz together with a request to shift to a working frequency where the safety message will be given.

8. ROUTINE COMMUNICATIONS WITH THE U.S. COAST GUARD

VHF-FM equipped boats and vessels are encouraged to install VHF-FM Channel 22 U.S. (157.100 MHz) for non-emergency communications with Coast Guard units. This may be accomplished by first calling the desired Coast Guard unit on Channel 16 then shifting to Channel 22 U.S. for working.

NOTE: Modern VHF-FM radios now have Channel 22 U.S., however, older models might not.

VISUAL DISTRESS SIGNALS (VDS)

The following is a pictorial plate showing the different types of VDSs to use or respond to in case of emergency. Remember, no person in a boat shall display a visual distress signal on water under any circumstances exc ept a situation where assistance is needed because of immediate or potential danger to a person on board.

Visual Distress Signals

			
Red Star Shells	Fog Horn Continuous Soundings	Flames on A Vessel	Gun Fired at Intervals of One Minute
			
Orange Background Black Ball & Square	SOS	"Mayday" by Radio	Parachute Red Flare
			
Dye Marker (any color)	Code Flags November Charlie	Square Flag and Ball	Wave Arms
			
Radio-Telegraph Alarm	Radio-Telephone Alarm	Epirb	Smoke

EMERGENCY POSITION INDICATING RADIOBEACON (EPIRBs)

An Emergency Position Radio Beacon (EPIRB) is a very useful piece of survival gear that has saved many lives in the Pacific in recent years. An EPIRB emits a radio signal that can be used to locate mariners in distress. Search and Rescue Satellite Aided Tracking (SARSAT) uses satellites to locate EPIRB positions. While orbiting the earth, the satellites continuously monitor EPIRB frequencies. When SARSAT receives an EPIRB signal, it determines the beacon's position which is ultimately relayed to the nearest Coast Guard Rescue Coordination Center where rescue units are dispatched to the scene (see Chapter V for more information).

NOTE: Mariners should ensure that their EPIRB is in working condition and stowed properly at all times to avoid non-distress emissions. Mariners are strongly recommended to register their EPIRBS for quicker confirmation of actual distress.

RESCUE COORDINATION CENTERS IN THE NORTHWEST

Location	Telephone No.	Manned By
Seattle, WA	(206) 220-7001	Coast Guard (US)
Victoria, B.C.	(604) 732-4141	Coast Guard (CAN)

THIRTEENTH COAST GUARD DISTRICT SEARCH AND RESCUE STATIONS

Thirteenth CG District Command Center - Seattle		(206) 220-7001
1.	U.S. COAST GUARD GROUP SEATTLE	(206) 217-6000
	a. Station Bellingham	(360) 734-1692
	b. Station Seattle	(206) 217-6754
2.	U.S. COAST GUARD GROUP PORT ANGELES	(360) 417-5840
	a. Station Neah Bay	(360) 645-2237
	b. Station Quillayute River	(360) 374-6469
3.	U.S. COAST GUARD GROUP ASTORIA	(503) 861-6211
	a. Station Cape Disappointment	(360) 642-2382
	b. Station Grays Harbor	(360) 268-0121
	c. Station Tillamook	(503) 322-3531
4.	U.S. COAST GUARD GROUP NORTH BEND	(541) 756-9210
	a. Station Chetco River	(541) 469-3885
	b. Station Coos Bay	(541) 888-3267
	c. Station Umpqua River	(541) 756-9273
	d. Station Siuslaw River	(541) 997-2486
	e. Station Yaquina Bay	(541) 265-5381
	f. Station Depoe Bay	(541) 765-2124
5.	COAST GUARD GROUP PORTLAND	(503) 240-9301
	a. Station Portland	(503) 240-9365

PROCEDURES AND SIGNALS BETWEEN AIRCRAFT AND SURFACE CRAFT FOR DIRECTING SURFACE CRAFT TO SCENE OF DISTRESS INCIDENT

The following procedures performed in sequence by an aircraft mean that the aircraft is directing a surface craft toward the scene of a distress incident:

1. Circling the surface craft at least once.

2. Crossing the bow or projected course of the surface craft close ahead at low altitude, opening and closing the throttle, or changing the propeller pitch.

3. Heading in the direction in which the surface craft is to be directed. The surface craft should acknowledge the signal by changing course and following the aircraft. If it is impossible for the surface craft to follow, hoist the international code flag NOVEMBER, or use any other signaling means available to indicate so.

4. If you are radio equipped, you should attempt to communicate with the aircraft on 2182 kHz or channel 16 (156.8 MHz) when the aircraft makes the above signals or makes any obvious attempt to attract your attention. In the event that you cannot communicate by radio, be alert for a message block dropped from the aircraft.

The following procedure performed by an aircraft means that the assistance of the surface craft is no longer required:

1. Crossing the wake of the surface craft close astern at a low altitude opening and closing the throttle or changing the propeller pitch.

SEARCH AND RESCUE OPERATIONS

1. VESSEL IDENTIFICATION

Coast Guard search-and-rescue aircraft and surface craft use radar to assist in locating disabled vessels. Wooden and fiberglass vessels are often poor radar targets. Operators of disabled craft that are the object of a search are requested to hoist, as high above the waterline as possible, a radar-reflecting device. If no special radar-reflecting device is aboard, an improvised device can be used. This should consist of metallic objects of irregular shape. The more irregular the shape, the better will be the radar-reflective quality. For quick identification at night, shine spotlights straight up. If aircraft are involved, once you are identified, turn lights away so as not to blind aircraft crew.

2. PREPARATIONS FOR TOWING

a. All personnel put on personal flotation devices.
b. Have bow cleared.
c. If line-throwing gun is used, keep all personnel out of the way, until projectile clears boat.
d. Have material (rags) handy for chafing gear.
e. Secure towline to bitt or crucifix.
f. Remove heaving line.
g. Make a drogue ready for use from your stern if your rudder cannot be controlled. Especially important when being towed in a following sea.
h. All persons remain topside, low and aft while under tow.
i. If in doubt, request additional briefing by Coast Guard boat operator.

3. OPERATING COAST GUARD DROPABLE PUMPS

a. Fill fuel tank at least half full of gas.
b. Keep pump filled with water through black one inch plug on top of pump. DON'T RUN WITHOUT WATER.
c. Connect color coded hoses. RED to RED, etc.
d. Pull speed control rod all the way out (L-shaped square rod under air cleaner).
e. Pull out choke (painted green on carburetor).
f. Crank engine by pulling starter cord rapidly.
g. When engine starts, push choke in gradually.
h. **IMPORTANT**: Most pumps are self-priming. If no water is pumped after one minute, however, remove filter plug allowing trapped air to escape. Then replace plug when engine starts to slow under load.
i. When finished, flush with FRESH water, return ALL gear to nearest Coast Guard unit.

4. HELICOPTER EVACUATION PROCEDURES The following procedures are prescribed by the Coast Guard during helicopter evacuation from a vessel. If you have a radio aboard, further instructions may be given by the helicopter on the voice distress frequency. As Captain or Boat Operator, each person on board is under your care and although the Coast Guard, doctors, and other agencies may assist you, each person is your responsibility. Helicopter evacuation is a hazardous operation to the patient and the helo crew, and should only be attempted in event of very serious illness or injury. Provide the doctor with all the information you can concerning the patient so an intelligent evaluation can be made concerning the need for evacuation. Today's helicopters CAN ONLY PROCEED UP TO 100 MILES off-shore for a pickup, and then only if weather conditions permit; so, if an evacuation is necessary, you must be prepared to proceed within this range.

a. WHEN REQUESTING HELICOPTER ASSISTANCE:

(1) Give accurate position, time, speed, course, weather conditions, sea conditions, wind direction and velocity, type of vessel, and radio frequencies.

(2) If not already provided, give COMPLETE medical information including whether or not patient is ambulatory (able to walk).

(3) If you are beyond helicopter range, advise your intentions so that a rendezvous point may be selected.

(4) If there are any changes in any plans or information, advise immediately. Should the patient expire prior to arrival of the helicopter, be sure to advise.

b. PREPARATIONS PRIOR TO ARRIVAL OF HELICOPTER:

(1) Provide continuous radio guard on 2182 kHz or specified VOICE frequency if possible.

(2) Select and clear most suitable hoist area. This must include securing of loose gear, awnings and antenna wires. Lash up or stow running rigging and booms. The stern is highly preferred for the hoist area. The foredeck should be prepared only when the stern or amidships cannot possibly be used.

(3) If the hoist is at night, light the pickup areas as well as possible. Be sure you DO NOT SHINE ANY LIGHTS on the helicopter that might blind the pilot and crew. If there are obstructions in the vicinity, put a light on them so the pilot will be aware of their positions.

(4) Advise location of pickup area BEFORE the helicopter arrives so the pilot may adjust for and make the approach aft, amidships, or forward as required.

(5) Remember, there will be a high noise level under the helicopter, so voice communication is almost impossible. Arrange a set of hand signals among the crew who will assist.

c. HOIST OPERATIONS:

(1) If possible, have patient moved to, or as close to, the hoist area as his condition permits - **THIS IS IMPORTANT**.

(2) Normally, if a litter is required, it will be necessary to move the patient to the special litter which will be lowered by the helo. Be prepared to do this as quickly as p ossible. **BE SURE** patient is strapped in, face up, WITH LIFE JACKET, IF HIS/HER CONDITION PERMITS. Be sure patient is tagged to indicate what and when medication, if any, was given.

(3) Change course to permit the ship to ride as easily as possible with the WIND on the bow, preferably ON THE PORT BOW. Try to choose a course to keep engine exhausts clear of hoist area.

(4) REDUCE SPEED to ease ship's motion BUT MAINTAIN STEERAGEWAY.

(5) If you do not have radio contact with helo, when you are in all respects ready for the hoist, SIGNAL THE HELO in with a "COME ON" by hand, or use flashlight at night.

(6) ALLOW BASKET OR STRETCHER TO TOUCH DECK PRIOR TO HANDLING TO AVOID STATIC SHOCK.

(7) IF A TRAIL LINE IS DROPPED by the helo, GUIDE BASKET or stretcher TO DECK WITH LINE: keep line clear at all times. Line will not cause shock.

(8) Place patient in basket sitting with hands clear of sides, or in the litter, as described above. Signal helo hoist operator WHEN READY FOR HOIST. Patient nods head if he is able. DECK PERSONNEL GIVE THUMBS UP.

(9) If necessary to take litter away from hoist point unhook hoist cable and keep free for helo to haul in. DO NOT SECURE CABLE TO VESSEL OR ATTEMPT TO MOVE STRETCHER WITHOUT UNHOOKING.

(10) When patient is strapped in stretcher, signal helo to lower cable, and signal hoist operator when ready to hoist. Steady stretcher to prevent swinging or turning.

(11) If trail line is attached to basket or stretcher use to steady, keep feet clear of line.

THIRTEENTH COAST GUARD DISTRICT - NON-EMERGENCY ASSISTANCE - Policy

Boaters who find themselves in need of assistance in non-emergency situations will receive help from the Coast Guard by either obtaining commercial assistance or directing other resources (including Coast Guard and Coast Guard Auxiliary resources) to the scene. This policy addresses the needs of boaters in non-life-threatening situations and is designed not to interfere with the rights of the commercial towing/assistance industry. Although this maritime search and rescue assistance policy has been in effect for several years, it was adjusted prior to the start of the 1988 summer boating season. The revised policy is a result of a review involving 14 public meetings around the country and evaluation of some 2,400 written comments from the public. The policy provides that:

1. In any situation in which the mariner is in immediate distress, an immediate response will be initiated. This response may be provided by the Coast Guard, the Coast Guard Auxiliary, or state, local, commercial, or private resources.

2. If neither the mariner nor the vessel is in immediate distress and no commercial companies are known to be available in the area, a Coast Guard resource will be dispatched.

3. If commercial towing companies operate in the area, the Coast Guard will assist the mariner in contacting any specifically requested alternate assistance. If none is requested, an offer to issue a Marine Assistance Request Broadcast (MARB) will be made. This broadcast will help to determine if someone in the area can come to the assistance of the mariner.

4. If an acceptable response (capable of safely accomplishing the mission in a reasonable time) is received to the MARB, the Search and Rescue Mission Coordinator (SMC) shall ascertain the expected time of arrival (ETA) on scene and advise the mariner. The SMC shall continue to monitor the situation until it reaches a successful conclusion. A reasonable response time, from initial notification to time on scene, is considered one hour or less. In situations where the response time will exceed one hour, a Coast Guard Auxiliary resource will be dispatched if it can provide a more timely response.

5. If no response to the MARB is received within 10 minutes, the SMC will select and proceed with the course of action (listed below) that will result in the most effective and timely response to the mariner.

a. Dispatch an Auxiliary resource.
b. Issue another MARB.
c. Make a telephone call to any resource (including commercial providers) that may be able to provide a timely response.
d. Dispatch a Coast Guard resource.

6. The mariner may decline the assistance offered, and the Coast Guard may make additional MARBs, but if the first assisting resource on scene is a commercial provider, only one additional MARB will be made. A list of telephone numbers for commercial providers in the area will be given to the mariner, upon request, so that they may contact alternate responders through the marine operator. A Coast Guard resource will not be dispatched unless the situation deteriorates into an emergency.

7. Once a vessel is taken in tow by a Coast Guard or Coast Guard Auxiliary vessel, it will not be turned over to another resource unless all parties agree, the transfer can be accomplished safely or, a more urgent situation requires the use of the Coast Guard vessel. A tow will normally be conducted to the nearest safe-haven.. The Coast Guard reminds boaters that under the non-emergency policy, the operator of a vessel needing assistance will have to pay for commercial services. To help reduce the need for assistance, mariners are advised to ensure that all safety equipment is on board, the vessel in good operating condition, sufficient fuel and necessary charts are on board, the radio is operating properly, and someone knows the sailing plan of the operator and will notify the Coast Guard is the vessel fails to return when expected. Questions concerning this notice should be directed to the Thirteenth Coast Guard District, Search and Rescue Branch at (206) 220-7259.

SHIP ABANDONMENT AND HYPOTHERMIA

If you are forced to abandon ship, your chances of rescue are increased if you have a pre-planned survival procedure and follow it. Records show that even the quickest ship sinkings usually require 15 to 30 minutes for the vessel to fully submerge. This affords valuable time for preparation. Here are some sound pointers for you to remember in a situation of this type:

1. Don as much warm clothing as possible, covering head, neck, hands, and feet.

2. If an immersion (exposure) suit is available put it over warm clothing.

3. If the immersion suit does not have inherent flotation, put on a lifejacket.

4. All persons who know that they are likely to be affected by seasickness should, before or immediately after boarding the survival craft, take the recommended dose of some recommended preventative tablets or medicine. The incapacitation caused by seasickness interferes with your survival chances; the vomiting removes precious body fluid while seasickness in general makes you more prone to hypothermia.

5. Avoid entering the water if possible. Board davit-launched survival craft on the embarkation deck. If davit-launched survival craft are not available, use ladders, or, if necessary, lower yourself by means of a rope or fire hose.

6. Unless it is unavoidable, do not jump from higher than 5 meters (16.4 feet) into the water. Try to minimize the shock of sudden cold immersion. Rather than jumping into the cold water, try to lower yourself gradually. A sudden plunge into the cold water can cause death or an uncontrollable rise in breathing rate may result in an intake of water into the lungs. On occasions it may be necessary to jump into the water; if so, you should keep your elbows at your sides, cover your nose and mouth with one hand holding the wrist or elbow firmly with the other hand. One should not jump into the water astern of a life raft because the ship might be moving through the water.

7. Once in the water, orient yourself and try to locate the ship, lifeboats, life rafts, other survivors or other floating objects. If you were unable to prepare yourself before entering the water, button up clothing now. In cold water you may experience violent shivering and great pain. These are natural body reflexes that are not dangerous. You do need to take action as quickly as possible before you lose full use of your hands, button up clothing, turn on signal lights, locate whistle, etc.

8. While afloat in the water, do not attempt to swim unless it is to reach a nearby craft, a fellow survivor, or a floating object on which you can lean or climb on to. Unnecessary swimming will "pump" out any warm water between your body and the layers of clothing, thereby increasing the rate of the body-heat loss. In addition, unnecessary movements of your arms and legs send warm blood from the inner core to the outer layer of the body. This results in a very rapid heat loss. Hence, it is most important to remain as still as possible in the water, no matter how painful it may be. Remember, pain will not kill you, but heat loss will.

HOW HYPOTHERMIA AFFECTS MOST ADULTS

Water Temperature (° F)	Exhaustion or Unconsciousness	Expected Time of Survival
32.5	Under 15 min.	Under 15 to 45 min
32.5 to 40	15 to 30 min.	30 to 90 min.
40 to 50	30 to 60 min.	1 to 3 hrs.
50 to 60	1 to 2 hrs.	1 to 6 hrs.
60 to 70	2 to 7 hrs.	2 to 40 hrs
70 to 80	2 to 12 hrs.	3 hrs to indefinite
Over 80	Indefinite	Indefinite

9. Try to conserve body heat. Float as still as possible with your legs together, elbows close to your side and arms folded across the front of your lifejacket, minimizing the exposure of the body surface to the cold water. Try to keep your head and neck out of the water. Another technique is to huddle closely to one or more persons afloat, making as much body contact as possible. You must be wearing a life vest to be able to hold these positions in the water.

10. Try to board a lifeboat, raft, or other floating platform or object as soon as possible in order to shorten your immersion time. Remember, you lose body heat many times faster in water than in air. Since the effectiveness of your insulation is seriously reduced by water soaking, you must now try to shield yourself from wind to avoid a wind-chill effect (convective cooling).

11. Do not use "drown proofing" in cold water. "Drown proofing" is a technique whereby you relax in the water and allow your head to submerge between breaths. It is an energy saving procedure to use in warm water when you are not wearing a life vest. However, the head and neck are high heat loss areas and must be kept above water. That is why it is more important to wear a life vest in cold water. If you are not wearing a vest, tread water only as much as necessary to keep your head out of the water.

12. Keep a positive attitude about your survival and rescue. This will improve your chances of extending your survival time until rescue comes. Your will to live does make a difference.

CHAPTER II

FIRST AID AND PRIMARY CARE

NOTE: It is recommended that you, as a vessel owner/operator, take a formal first aid course given by a professional medical person. This chapter is only a guide to aid you in emergency procedures but does not cover all situations.
THERE IS NO SUBSTITUTE FOR PROFESSIONAL TRAINING AND PRACTICE!

FIRST AID

First aid is the immediate and temporary care given to sick or injured persons. It does not take the place of professional medical treatment, but it can mean the difference between life and death, between quick recovery and long hospitalization, and between temporary disability and permanent injury. For most mariners, help is but a short distance away, and can be contacted quickly via radio, but there are times at sea when you have only to depend on yourself or your crew in an emergency, so it is important to learn how to react positively and effectively, and with a realistic perspective as to what one can and can't do or provide. It is important to do the best you can under the circumstances, but do not blame yourself if your efforts fail. You should realize that you have two jobs to do:

1. Ensure the victim's immediate survival.
2. Become an extension of the medical professionals that should be contacted by radio as soon as you can accurately describe the problem.

This chapter is intended to help you cope with the conditions that represent immediate threats to a victim's survival and seeks to help you gather information necessary to obtain professional advice by radio, and is intended only as an introduction to emergency first aid. It is recommended that you have on board a more complete text on emergency medicine and obtain professional training.

WHEN IN DOUBT SHOUT - THE RADIO CALL

In the event of a serious accident or illness, as soon as you have dealt with the immediate threats, you should contact the Coast Guard on one of the distress frequencies. The Coast Guard will obtain professional advice and relay instructions, but the advice won't be any good unless you can provide enough accurate information. The better you can describe the problem, the better the Coast Guard can help you treat it. You have to study the victim's body and find out what is wrong, then relay the nature and extent of his injuries over the radio. The professionals can give you better advice if you can take the victim's vital signs, and if you have his/her medical history available. **SEE CHAPTER I - EMERGENCY PROCEDURES FOR MORE INFORMATION**.

THE SITUATION

Before rushing into the accident site, study the environment to ensure there is no continuing danger. Don't become a victim yourself. Make sure the danger is no longer present or is adequately eliminated (i.e.: loose rigging is secured, electrical power is secured, etc.). Work as quickly as possible but not frantically or in a panic. Try not to waste time looking for ready made (store bought) medical supplies - do the best you can with whatever is at hand and, if possible, have a third person call for help and obtain adequate medical supplies, if on board. Remember: Take a few seconds to survey the situation before you begin to provide assistance.

SURVEY THE DAMAGE

Try to determine the nature and extent of the problem. There are two stages of examination. First you must locate and treat immediate threats to the victim's survival. This is the primary survey and should normally be conducted as follows:

1. CLEAR THE AIRWAY.
2. RESTORE BREATHING.
3. CHECK CIRCULATION.
4. RESTORE CIRCULATION.
5. CONTROL GROSS BLEEDING.
6. TREAT SHOCK.
7. IMPROVE THE ENVIRONMENT.
8. TREAT/SPLINT – FRACTURES

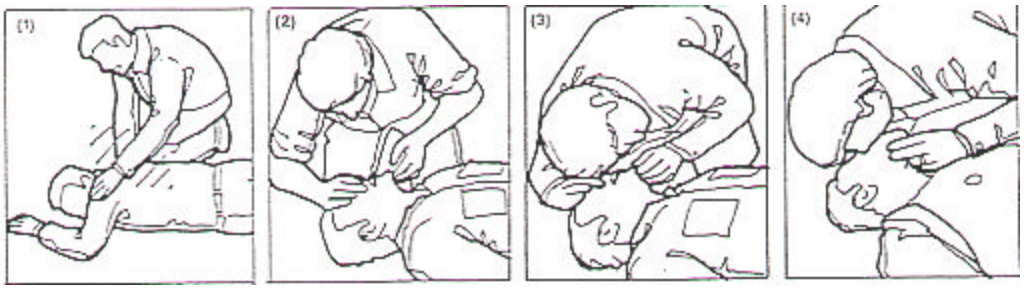
Circumstances may necessitate changing the order (i.e.: you can't give first aid in an unsafe environment such as fire). You have to remain calm and determine the gravest danger. Keep in mind that blood loss may look much worse than it really is. Once life-threatening dangers have been eliminated, do a second, more thorough survey prior to moving the victim. In general a victim should not be moved until his injuries have been examined carefully to insure there are no fractures or injuries to the back or neck, and that other fractures are properly secured.

CARDIO-PULMONARY RESUSCITATION - CPR

The ABC's of CPR are: AIRWAY, BREATHING, and CIRCULATION.

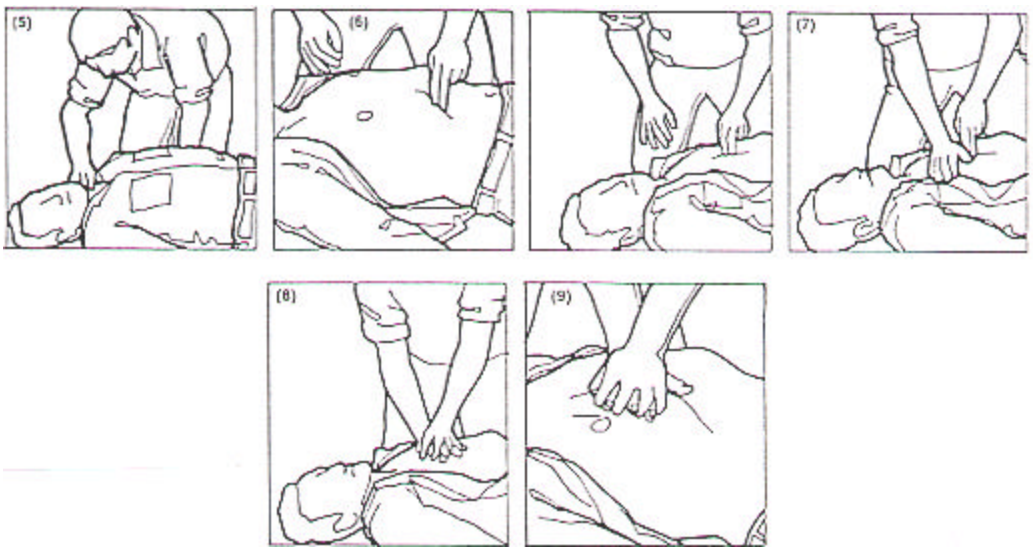
When coming upon a victim use the following systematic procedure for administering CPR:

1. Gently shake the victim's shoulders and shout to see if he/she is conscious (figure 1).
2. Instruct a specific person nearby to call 911.
3. Position the victim on his/her back on a hard, flat surface. A victim with suspected neck injuries who is lying on his/her stomach needs his/her neck stabilized as you roll him/her over.
4. AIRWAY
   a. If the victim does not respond, call for help. Tilt the head and lift the chin to clear the tongue out of the way (figure 2).
   b. Look to see if the chest or stomach is rising or falling.
   c. Listen for the sound of breathing for 5 seconds (figure 3).
   d. Feel for exhaled air against your cheek.
5. BREATHING
   a. If the victim is not breathing, clear the mouth and throat of any foreign matter.
   b. Seal the victim's mouth with yours.
   c. Give two successive full-lung breaths into the victim's mouth within five seconds (figure 4).
   d. Check to see if the victim's chest rises or falls.
   e. Check the victim's carotid pulse at the neck for 5 to 10 seconds (figure 5). If there is a pulse, continue rescue
   f. Breathing at the rate of 12 times per minute (once every 5 seconds).



6. CIRCULATION
   a. If there is no pulse remove obstructive clothing from the victim's chest.
   b. Feel for the lower end of the breastbone with 2 or 3 fingers (figure 6).
   c. Place the heel of one hand just above your fingers, so that the heel rests on the lower half of the breastbone (figure 7).
   d. Place the other hand on top of the first. Keep your arms straight and keep shoulders over the breastbone (figure 8).
   e. Compress the breastbone straight down 1.5 to 2 inches for adults (figure 9).
   f. Call for help.

NOTE: If you are by yourself, give 2 rescue breaths after 15 chest compressions at a rate of 60-80 compressions per minute. Check for a pulse and breathing after 1 minute, then after 4 to 5 minutes. Rescue breathing is the same as CPR but without the chest compressions. Frequently check to see if the victim begins breathing on his/her own, allowing him/her to exhale passively.



BLEEDING

It is imperative to control gross bleeding. Arterial bleeding from a major blood vessel can cause the victim to bleed to death in a very short time. Rapid loss of as little as 1 quart of blood can cause shock. Bleeding from veins or capillaries may scare you even when it is not an urgent priority. It is important to be able to recognize the types of bleeding. Arterial bleeding - blood is bright red and gushes forth in jets or spurts in rhythm with the victim's heartbeat. It is much redder than the blood you commonly see as the result of minor cuts or scrapes. Bleeding from veins - blood is dark red and bleeds in a steady flow. Capillary bleeding - blood is also dark red and oozes from the wound.

Arterial bleeding

Bleeding from veins

Capillary bleeding

TREATMENT OF BLEEDING

When coming upon a victim with gross bleeding the use of pressure points is an effective way to reduce or stop bleeding until a pressure bandage can be applied. Pressure points are specific areas where an artery passes over a bone and a pulse can be felt (see pictures below). Use pressure points in combination with direct pressure and elevation. A conscious victim can apply pressure to his/her own wound so that you can attend to other injuries or treat other victims. Remember: **Pressure is always applied between the wound and the heart**.

To further control and stop gross bleeding:

1. Use the palm of your hand to apply direct pressure over the wound.

2. Use a thick pad of cloth as a dressing between your hand and the wound. It should be sterile, or at least as clean as possible. Never remove the dressing even if it becomes blood-soaked. Instead, add another dressing on top of the first and continue applying direct pressure and elevating the part.

3. Raise injured arms or legs to a level higher than the heart unless movement will cause further damage (in the case of fractures, etc.)

4. A pressure bandage can replace direct hand pressure on most body parts. Center the bandage over the dressing, wrap the ends around the body part and tie the knot directly over the dressing.

5. After bleeding has been controlled with a pressure bandage, check frequently for swelling and other indications of excessive pressure. Be sure the pressure bandage has not become a tourniquet.

NOTE: Warning signs for excessive pressure include swelling next to the bandage site, numbness to touch, sensation of pins and needles, the limb becoming white or purple, and pain beyond the site of the injury. Direct pressure is effective in stopping the bleeding from nearly all wounds. It almost always eliminates the need for a tourniquet. A tourniquet is **NEVER** put on unless the bleeding is so severe that it cannot be stopped by any other means.

Subclavian Artery

Brachial Artery

Radial Artery

Femoral Artery

Carotid Artery

INTERNAL BLEEDING

It is more difficult to identify internal bleeding, but one should always suspect it if the victim has suffered a hard fall or heavy blow to the body. Symptoms:

1. Vomit that looks like coffee grounds.
2. Coughed-up blood that is bright red or bubbly.
3. Paleness
4. Rapid, hard-to-feel pulse.
5. Lightheadedness and restlessness.
6. Thirst.
7. Confusion.
8. Dizziness, weakness, fainting.
9. Immediate Treatment
10. Check the ABCs. (Airway, Breathing and Circulation)
11. Treat for shock.
12. Seek medical advice.
13. Do not give victim anything to eat or drink.
14. Look for injuries such as broken bones which may have caused the bleeding.
15. Stay calm and reassure the victim.

NOTE: On any bleeding, shock is always present in victims who have lost blood. Even if the symptoms of shock are not visible, treat for it as a preventative measure. In all cases of bleeding, keep the victim quiet to assist blood clotting. Do not move the victim unless it is absolutely necessary. If you must move him/her, handle him/her gently, keep the injured part elevated as long as doing so does not cause further injury or pain, and keep him/her as comfortable as possible.

SHOCK

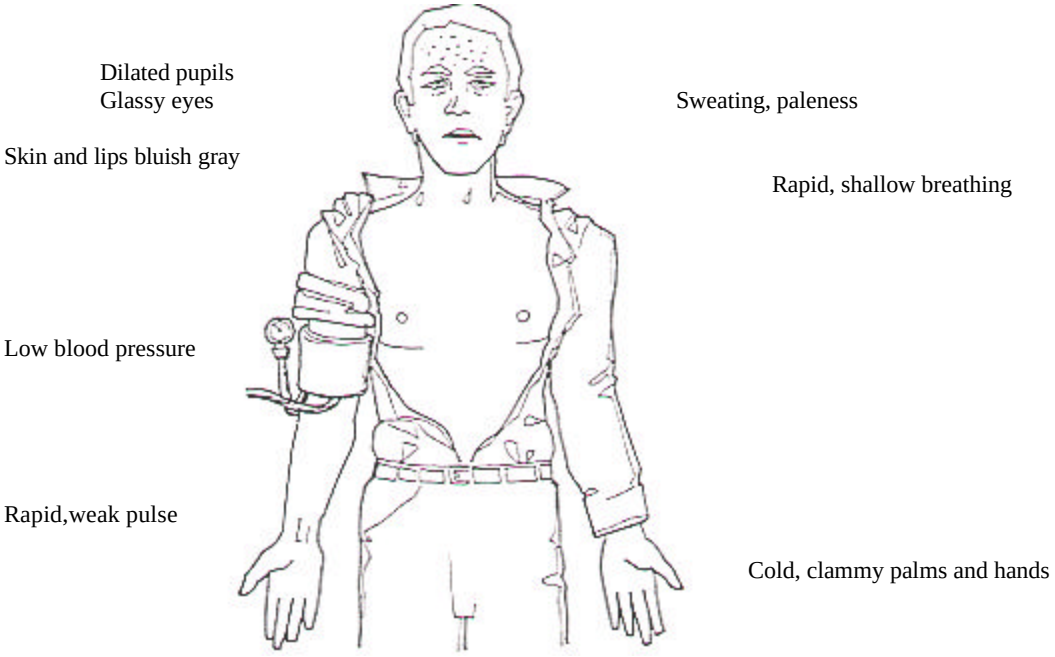
Shock is a serious condition that may cause death. It is caused by reduced blood supply to body parts and tissues. The victim should be checked for shock symptoms whenever there has been an injury or serious illness. Only the ABCs and treatment of gross bleeding should have priority over the emergency care of shock. The signs of shock may not appear until the condition is severe. You should always presume that shock may be present and treat it in a preventative manner. **Remember**: Some degree of shock occurs in almost all injuries.

1. SYMPTOMS

    a. Pulse rapid and weak, usually over 100 beats per minute.
    b. Low blood pressure.
    c. Rapid, shallow breathing.
    d. Eyes glassy or lackluster, pupils dilated.
    e. Skin and lips pale and bluish-gray.
    f. Clammy sweat.
    g. Nausea and vomiting.
    h. Thirst.
    i. The victim may be restless or anxious and excited, becoming confused, finally unresponsive.
    j. The victim may faint if sitting or standing.

2. TREATMENT. It is much easier to prevent shock than to treat it after it develops. The treatment that can be done by nonprofessionals is limited. Nevertheless, there are vital measures that can be taken to prevent shock or to minimize its effect.

    a. Check the ABCs.
    b. Eliminate the cause (i.e.: restore breathing, control bleeding, alleviate pain, etc.).
    c. Keep the victim lying down, with his/her feet raised to maximize circulation to the heart and brain. Exceptions to these rule are:
        (1) Head, neck and back injuries. In these cases, the victim should not be moved until he/she is prepared for transportation.
        (2) Victims who are suffering facial injuries that involve bleeding or fluid loss. Such victims should be positioned on their stomachs with their heads turned to one side to minimize breathing complications.
    d. Keep the victim warm but not hot. Use blankets under and over their body to maintain normal body temperature.
    e. Continue to observe the victim. Check the ABCs and note any worsening of the condition.
    f. Reassure the victim.
    g. Seek medical advice by radio.
    h. In general, do not give the victim anything by mouth until you have a doctor's okay. If you are in a remote area and must treat the victim for an extended period of time, water may be administered to a conscious victim.
    i. Victims in severe shock should be given high priority for evacuation and professional treatment.



Symptons of Shock

Severe Shock - if the victim is in severe shock, place him on his back with his head slightly lower than his feet (condtion permitting).

Vomiting or bleeding around the mouth and semi-conscious - if the victim is in danger of choking on blood, vomit or water, position him on his stomach with his head turned to one side lower than his feet.

Shortness of breath - if the victim has a chest injury or respiratory obstruction, he would probably be most comfortable and breathe easiest in a sitting or semi-sitting position.

THE SECONDARY SURVEY

Once you have checked the ABCs, examined the victim for gross bleeding, and provided preventative care for shock; it is time to conduct the secondary survey. The secondary survey is a top of the head to bottom of the feet examination. TAKE YOUR TIME. It would be very helpful to have someone on hand to write down your findings and note any changes in the victim's condition. The following is a suggested routine for your secondary survey:

1. Be alert to possible injuries to the neck or spine. Remember: "If in doubt don't move the victim." It is better to be safe than sorry. But continue on with the secondary survey.

2. If the victim is conscious, ask him/her questions, reassure them, and let them know what you are doing. Communication between you and the victim will provide the best information as you examine him/her.

3. Use your fingers to examine his/her neck, head, and face but, be careful not to move the head if you suspect a neck injury.

4. Look at the eyes and for discharge from the nose and/or ears.

5. Slip your hand underneath his/her lower back and examine upwards to the shoulder blades looking for other injured areas (i.e.: blood, broken bones, cramped muscles, etc.).

6. Place your hands along each side of his/her chest and lightly compress it. Also check the sternum for injuries.

7. Use your fingers to press lightly on each of the four abdominal quadrants looking for ridged areas and damage to internal organs.

8. Press the hips together and down at the hip crest and pelvic bone.

9. Slide your hands along the insides of his/her legs up to the groin. Check for blood, urine, or feces. The latter two indicate loss of bladder or bowel control.

10. Feel each leg and foot. Have him/her press your palm with his/her feet. Is the pressure equal?

11. Feel shoulders, arms, and hands. Have him/her squeeze your fingers to test for equal grip.

Remember: This is no time to be afraid or shy in touching your shipmate. You are looking for things that do not feel right (i.e.: wounds, fractures, spongy spots, excessive rigidity, areas of pain or that have no feeling). Now is the time to check for the vital signs. Make sure you have noted on paper what you have found so far, as this will aid you in determining if there has been a change in the victim's condition.

VITAL SIGNS

These are the key indicators that will help medical professionals evaluate the victim's condition. They are:

1. Pulse Rate
2. Respiration Rate
3. Temperature
4. Blood Pressure

In the event of any serious illness or injury, the vital signs should be checked frequently (every 5 to 10 minutes) and the information written down with the time of notation. Changes in the vital signs tell the professional who is trying to assess the situation by radio whether or not the victim is getting better. To take the vital signs, you need a watch with a second hand, a thermometer, and a blood pressure cuff (BP cuff) and stethoscope. The latter two require some professional training and practice in order for you to use them properly. They are also recommended as a part of your on-board first aid kit.

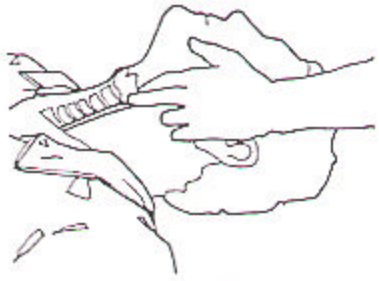
PULSE

The pulse (heart rate) is most easily felt at the carotid artery on either side of the neck, as it is large and located close to the heart and is usually the last to disappear. On a conscious victim the radial pulse (on the wrist) may be more convenient, as you can take the blood pressure on that arm also.

1. To find the radial pulse: Place your middle finger over the victim's artery on the thumb side of his wrist. Next move your finger and press lightly until you find the pulse beat. Count the number of beats in a minute using the second hand of your watch. You can also time the beats for 30 seconds and them multiply the number by 2.
2. To find the carotid pulse: Tip the victims head back gently and locate the Adam's Apple. Next slide your index and middle fingers into the groove between the throat and neck muscles on the side closest to you.

NOTE: Do not use your thumb, as it has a pulse of its own and will give you a false count.

To find Carotid Pulse:
(1) Tip head back and locate Adams Apple.



(2) Slide index and middle fingers into groove between throat and neck muscle at side closest to you.

TEMPERATURE

Body temperature measures the balance between heat production and heat loss. There are three types of thermometers available. They are:

1. Oral. You should use an oral thermometer if the victim is conscious and alert. If his/her mouth is dry, parched, or inflamed or if the victim is delirious and irrational do not use an oral thermometer. To take an oral temperature, use a sterile thermometer and shake it down until the mercury is below 96° Fahrenheit. Place it under the victim's tongue and have him/her close his/her lips tightly without biting. Leave it in one minute before removing and reading. Normal mouth temperature is 98.6°F. Readings below 95°F or above 105°F represent critical temperatures.
2. Rectal. To take a rectal temperature, select the proper thermometer and lubricate it with Vaseline or K-Y jelly. Insert the tip about 1.5 inches into the rectum and hold it in place for 3 minutes (do not leave it unattended). Wipe the thermometer free of jelly before reading. Normal rectal temperature is 99.6°F.
3. Hypothermic. A hypothermic thermometer is similar to a rectal thermometer except that is can measure body core temperatures to as low as 70°F.

All three types of thermometers should be part of your on-board first aid kit, if possible.

STAGES OF HYPOTHERMIA

Stage	Core Body Temperature
Normal	98.6°F
Shivering	96°F to 90°F
Muscle rigidity begins	90°F
Unconsciousness	85°F
Death	72°F and below

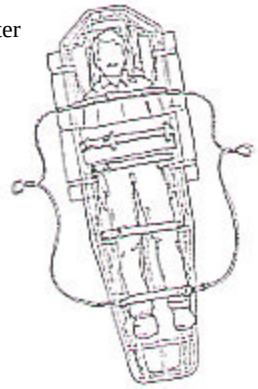
RESPIRATION

Rate of respiration is the number of breaths taken per minute. The normal respiration rate is 14 to 20 breaths per minute (count one breath each time the victim breathes in and out). To get an accurate count, it is best to count respirations when he/she is not aware of what you are doing.

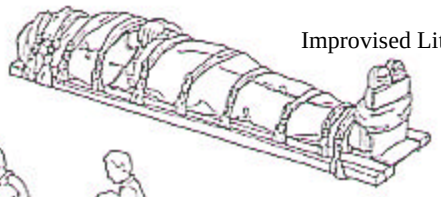
TRANSPORTING VICTIMS

Safe transport of a victim is essential in order to obtain professional medical attention or to move the victim out of harms way. Choosing the proper method is as important as any other first-aid procedure. The victim's life may depend on the manner in which you move him/her after the injury. Whenever possible, use a litter, stretcher, or backboard to transport seriously injured victims, especially those you suspect of having neck or back injuries. Manual carries should be used only to get victim away from immediate danger or to move him/her a short distance. Take the stretcher to the victim, cover him/her, and make him/her comfortable. Before you can transport a victim make sure you have: (1) Checked the ABCs (2) Controlled gross bleeding (3) Treated for shock (4) Insured the wounds are dressed and fractures are immobilized. The following are pictorials showing the various methods of transporting victims:

Stokes Litter



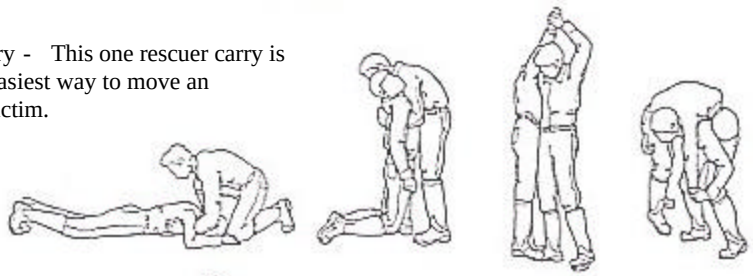
Improvised Litter



Chair Litter

Manual Carries

Fireman's Carry - This one rescuer carry is probably the easiest way to move an unconscious victim.



Pack Strap Carry - If the victim is on a bed or chair, this carry is convenient. The victim's arms are brought across the shoulders taking care that they are well up i.e. that his armpits rest on the shoulders of the rescuer. The victim's arms are then crossed in front and grasped firmly.

Drag Carry - One rescuer method for hauling an unconscious victim for a short distance. The victim's. hands are tied and placed behind the rescuer's neck

Blanket Drag - The victim is placed on a blanket and moved by pulling on one end of the blanket. This method is used when the victim is unconscious and has injuries which forbid handling or lifting by a single bearer.

FIRST AID KIT

All vessels should have a first aid kit on board. It should be adequately stocked and regularly inspected and replenished. You should insure that everyone on board knows where all emergency gear is kept. A first aid kit should be stored near the survival equipment you would take with you when abandoning ship. The contents should be sealed in a weatherproof container with individually sealed packages, labeled with the trade name, generic name, and expiration date. Contents should be checked before getting underway or at regular intervals. For the most part, items will remain sterile if unopened, but should be replaced every 5 years. The following is a list of supplies, equipment, and medications recommended for a basic first aid kit. The contents and quantity will vary according to the medical history of people on board, the number of individuals on board, the length of time you will be underway, and the available storage space on board.

1. INSTRUMENTS AND EQUIPMENT

- Complete first aid manual
- Rescue shears
- Airway pharyngeal
- Rectal thermometer
- Cervical collar
- Safety pins
- Gauze pads (various sizes)
- Stretch bandages (various)
- Adhesive tape
- Scrub brush
- Forceps
- Blood pressure cuff
- Hypothermic thermometer
- Full arm splint
- Burn sheet
- Gauze roll bandages
- Compresses (various sizes)
- Paper tape
- Eye magnet & nylon loop
- Tweezers
- Stethoscope
- Cyclume light
- Full leg splint
- Space blanket
- Non-adherent pads
- Band-aids (various sizes)
- Butterfly closure & steri-strip package
- Scissors
- Scalpel w/ #11 blade
- Oral thermometer
- Pen light
- Finger splint
- Cotton swabs
- Vaseline gauze
- Triangular bandages

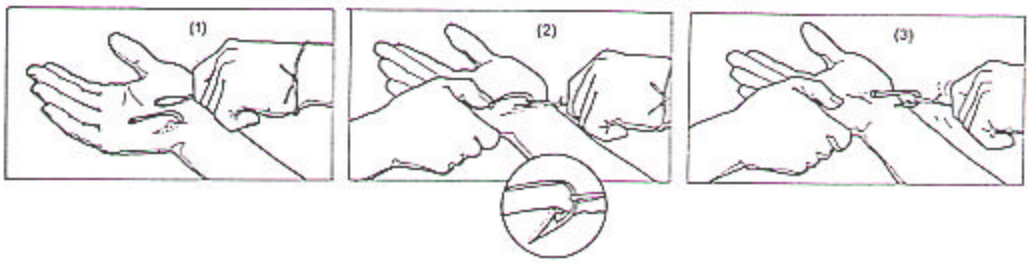
2. OPTIONAL

- Oxygen cylinder, regulator, tubing, and mask
- Urinary catheter

3. MEDICINES

- Aspirin
- Acetaminophen
- Antacids
- Eye antibiotic drops
- Eye cortisone drops
- Ammonia inhalant
- Providone-iodine
- Hibiclens or equivalent
- Triple antibiotic ointment
- Lubricant
- Oil of clove
- Mineral oil
- Boric acid
- Blistex
- Insta-glucose
- Benzoin
- Cold pack
- Ipecac syrup
- Silver sulfadiazine burn cream

Fishhook Injury



NOTE: It is recommended that you, as a vessel owner/operator, take a formal first aid course given by a professional medical person. This chapter is only a guide to aid you in emergency procedures but does not cover all situations.

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CHAPTER III

GUIDE TO HAZARDOUS BARS

COASTAL SEA SURFACE CONDITIONS

Tides (changes in water level) are caused mainly by the gravitational pull of the sun and moon. There are roughly two tides daily in the Pacific Northwest. A flood tide is the tidal movement of water towards shore, and an ebb tide is the movement away from shore or downstream. Slack water is when there is no tidal movement. Tidal Current is the flow of water. In Washington and Oregon saltwater reach tidal currents can obtain considerable velocities, especially when the ebbing tide is reinforced by river runoff.

COASTAL BARS

The most dangerous condition occurs when a swift ebb current meets heavy seas rolling in from the Pacific Ocean at a shallow river entrance (called a bar). At these coastal bars the water "piles up" and then "breaks". Even on calm days a swift ebb tide may create a bar condition that is too rough for small craft (any vessel under 65 feet). It is safest to transit from harbor to ocean only on slack water, flood tides, or when the sea state is calm. If you are inside the bar when rough conditions exist, remain inside! If you are trapped outside a rough bar on an ebb current, wait a few hours until the tide floods. In addition, waves build up at shallow areas such as sand spits and shoals. These areas are dangerous and should be avoided at all times. In a bar area, sea conditions can change rapidly and without warning. Always cross with caution! Bar guides for the various rivers and bays of the Pacific Northwest are contained in this Chapter.

BAR CLOSINGS

Federal statutes authorize the Coast Guard to terminate the use of recreational boats on many Oregon and Washington coastal bars when unsafe boating conditions exist. Bar restrictions are activated when, in the judgment of the Coast Guard, conditions of wave height and/or surface current make boating unsafe. The bar warning sign is a diamond-shaped white warning daymark with orange reflective border and the words "ROUGH BAR" in black letters. Generally, two alternating quick flashing yellow lights are displayed when seas exceed 4 feet in height. Lights are usually extinguished during lesser sea conditions, but this is no guarantee that the bar is safe. Bar Warning Signs are located at: CHETCO RIVER, COOS BAY, UMPQUA RIVER, SIUSLAW RIVER, YAQUINA BAY, DEPOE BAY, TILLAMOOK BAY, GRAYS HARBOR, and QUILLAYUTE RIVER

JETTIES

In general, jetties continue seaward for several yards past the visible end. By all means AVOID CROSSING OVER A SUBMERGED JETTY. Navigate with extreme caution near jetties particularly when wind and sea are setting you toward the jetty.

RANGE MARKERS (See Chartlets for location)

Front and Rear Range Markers are rectangular-shaped dayboards either red, green, black, or white, with a contrasting colored center strip. (Most Range Markers are KRB, red with a black center stripe.) For nighttime use most Range Markers are lighted. By steering a course which keeps the two range markers or their lights in line with one another, the mariner will remain within the approximate channel. Because entrance channels are constantly shifting, the range markers do not always mark best water. The mariner, however, will remain in the approximate channel by steering a course which keeps these range markers in line. For safe passage of coastal bars and waterways the prudent mariner should always consult the most recent edition of the Coast Guard Light List Volume VI and an updated version of the area chart.

NOTE: Nehalem River Entrance Range Daybeacons are privately maintained and should only be used if one has local knowledge of the area.

SEASONAL AIDS TO NAVIGATION

Due to severe weather conditions and reduced vessel traffic during the winter, numerous aids to navigation (i.e.: lights, buoys, fog signals) are seasonally discontinued, withdrawn, or replaced by smaller aids. These changes occur at regular intervals each year. The approximate dates are contained in the Light List, Volume VI, Pacific Coast and Pacific Islands 2002 Edition (COMDTPUB P16502.6) column 8, and on nautical charts produced by National Ocean Service. The actual dates may be changed due to adverse weather or other conditions. Mariners should consult the Coast Guard's Local Notice to Mariners and listen to Broadcast Notice to Mariners for the dates that seasonal changes take place.

CHETCO RIVER BAR INFORMATION

DANGER AREAS (See Chartlet)

1. WEST JETTY ROCKY AREA: This is dangerous because of many rocks and shoaling. At high tide the rocks are covered by water and the area appears to be navigable, but is extremely dangerous. This area is to be avoided at all times.

2. EAST AND WEST JETTY SHOAL AREAS: These areas are extremely dangerous at all times because of submerged rocks and breakers. Rocks in these areas may be seen at low tide. Avoid these areas at all times.

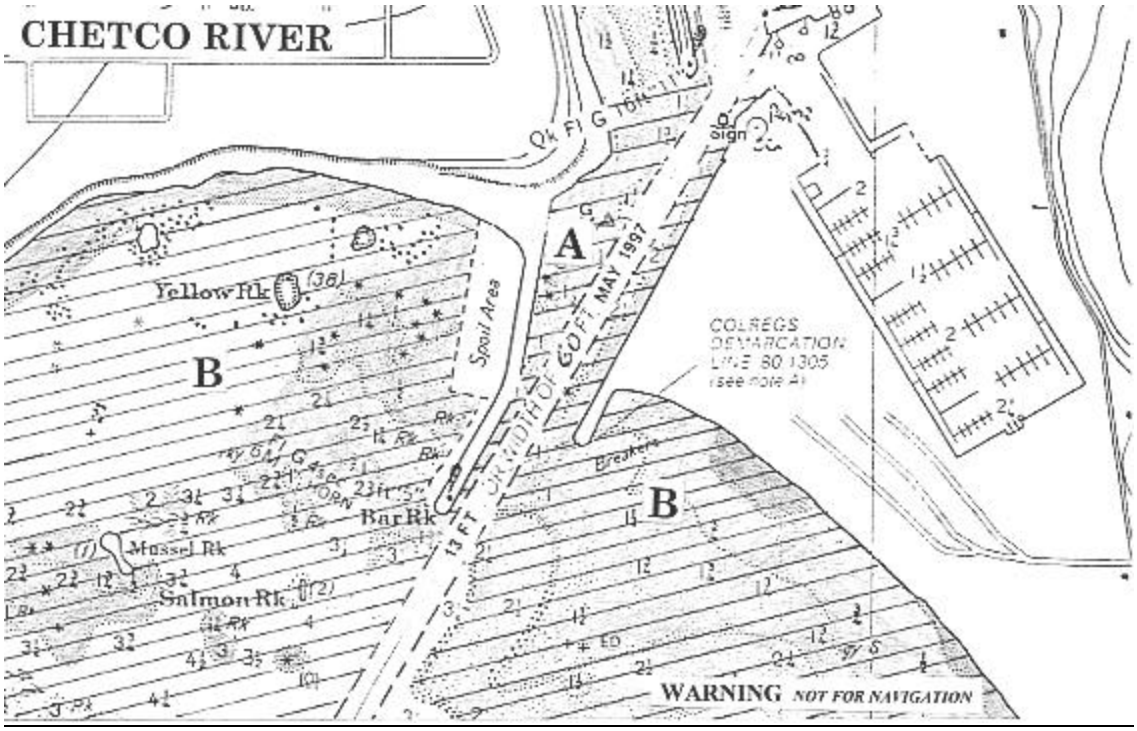
BAR CONDITION REPORTS

The wise boater is always aware of the weather. A few minutes spent in checking the existing weather and sea conditions, as well as the forecast for your area, is common sense. In addition, the good boater will always keep an eye on the weather when boating. At the first sign of threatening weather the boater will seek shelter.

1. Given by Radio Station KURY -- 910 kHz.
2. Summer -- Every hour during daylight.

ROUGH BAR ADVISORY SIGN

At Chetco River the sign is located on Coast Guard fuel dock at the Coast Guard station and faces approximately NNW.



ROGUE RIVER INFORMATION

DANGER AREAS (See Chartlet)

1. SHOAL WATER SOUTH SIDE: Alongside the south side of the Rogue River Channel are shoal water and gravel bars. This shoal water breaks to a height of 6 feet when a swell is running. Many boats fishing inside the river, trolling between the jetties, find themselves set into this dangerous area by northwest winds. If a vessel breaks down in the channel and is not anchored, the northwest wind and ebb tide will set it into this dangerous area in a matter of minutes.

2. OUTER END NORTH JETTY: Breakers are almost always present in this area. Even when it appears to be calm, there may be occasional breakers 1,000 feet outside the south jetty. When the sea is running from the west or southwest this area is very dangerous.

FISHING INSIDE ROGUE RIVER CHANNEL

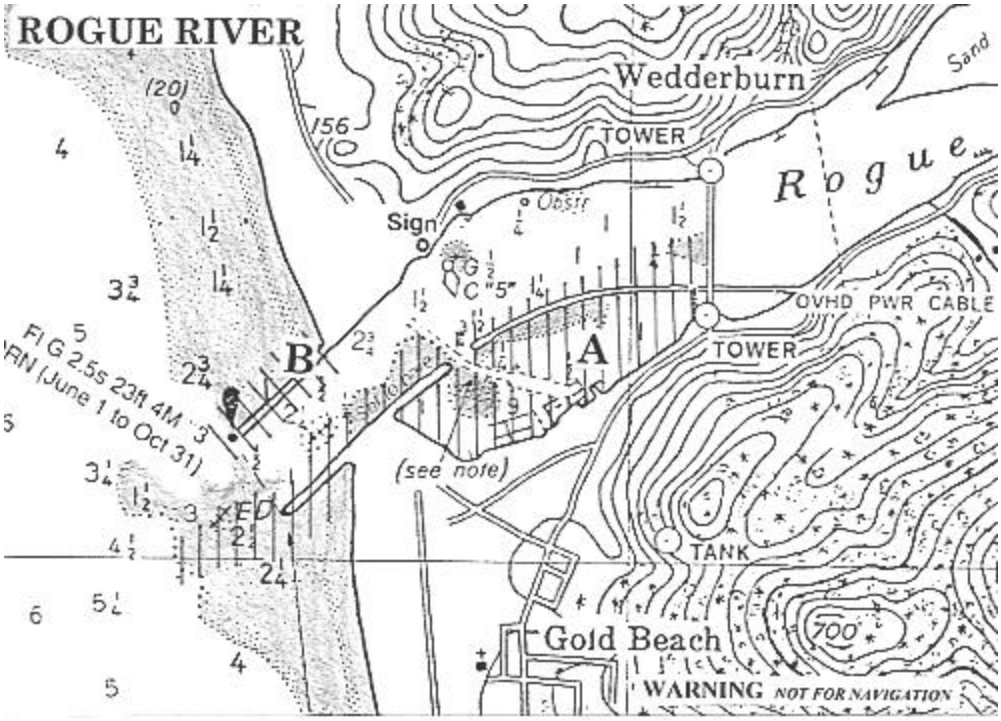
During recent years, small boats which do not usually go out into the ocean fish just inside the bar and troll in an area between the North and South jetties. Frequently there are a great number of boats in this small area and they tend to crowd each other. Because trolling is the method of fishing most frequently used, lines are sometimes accidentally caught in boat propellers. Should this happen, the disabled boat should immediately anchor or call for aid. A northwest wind or ebb tide could set your boat into a dangerous area in a matter of minutes.

ROGUE RIVER CHANNEL

Rogue River Channel lies along the North Jetty. This bar is unstable with frequent changes in channel depth. Local knowledge is required to cross the bar. Mariners are urged to use and stay within the channel.

BAR CONDITION REPORTS

NOTE: The Coast Guard Station on the Rogue River is activated and operational when the boating activity is significant enough to warrant the patrol. This determination shall be made by the Group Commander of Coast Guard Group North Bend, after consultation with the Port Director.



COQUILLE RIVER BAR INFORMATION

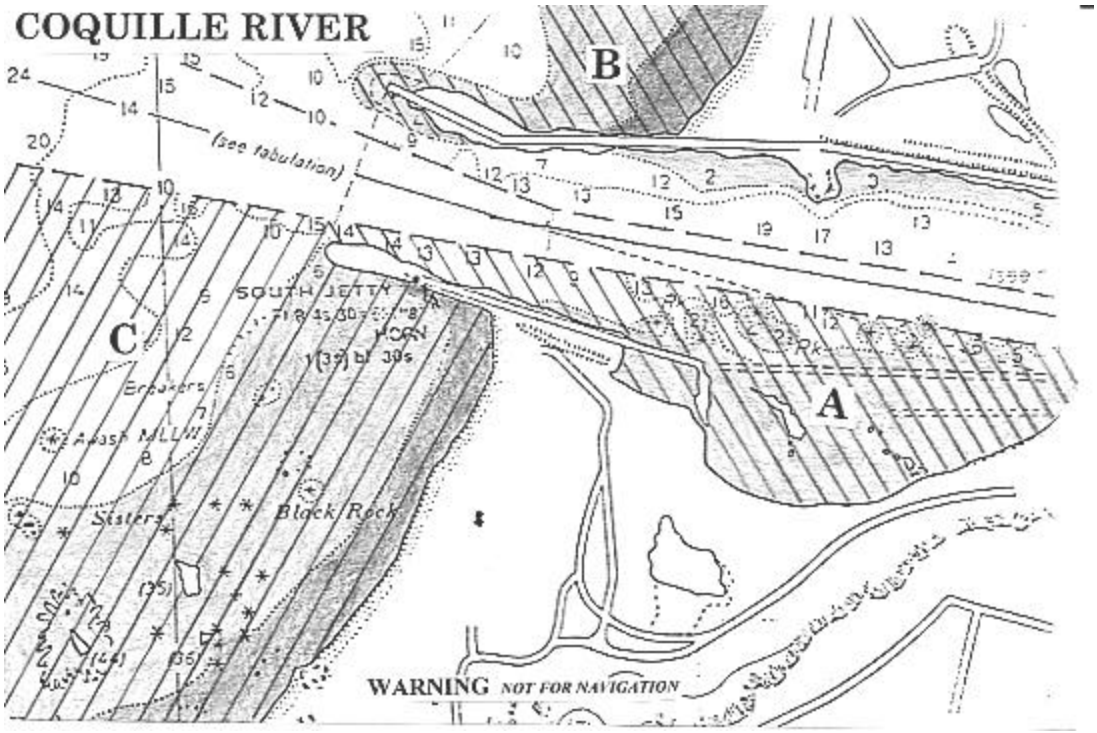
DANGER AREAS (See Chartlet)

1. SOUTH JETTY: It is always dangerous to get too close to the end of a jetty. An unexpected breaker could carry a small boat onto the end of the jetty with great force. The inside of the South Jetty is dangerous. Boaters should remain clear of this area. The prevailing northwest wind could set a powerless boat onto the jetty.

2. NORTH JETTY: Stay clear of the end of this jetty as the sea breaks almost continuously. A shallow area with partially submerged rocks extends from the abandoned lighthouse to the end of the jetty. Large swells which occur in this area could put a boat onto these rocks.

3. SOUTH SIDE OF COQUILLE RIVER ENTRANCE: The area to the south of the entrance can be very dangerous. There are several rocks just below the surface that cannot be seen except during heavy seas. There is a prevailing northwest wind during the summer months and the sea currents run to the south. These two conditions may cause a powerless boat in this area to drift onto these rocks.

BAR CONDITION REPORTS
NOTE: The Coast Guard Station on the Coquille River is activated and operational when the boating activity is significant enough to warrant the patrol. This determination shall be made by the Group Commander of Coast Guard Group North Bend, after consultation with the Port Director.



COOS BAY

DANGER AREAS (See Chartlet)

1. A. SAND SPIT, SOUTH SLOUGH: As you leave the Charleston Boat Basin, the South Slough Sand Spit is on your left, and though it appears safe, this area can't be safely crossed. The spit extends north and parallel to the channel from South Slough Buoy 6 approximately 450 yards toward South Slough Light 4. Presently, Lighted Buoy 2 marks the North end of the sand spit. This area should not be crossed.

2. SUBMERGED JETTY: Proceeding out from the Charleston Boat Basin in the South Slough Channel, when you are directly between South Slough Light 4 and Can Buoy 5, directly ahead will be South Slough Light 1 which marks the end of the Submerged Jetty. This Jetty is only visible at low water. When departing the Charleston Boat Basin, stay to the left of Light 1 at all times.

3. SAND SPIT, NORTH BEACH: This area is dangerous because of shoal waters and submerged jetties. Occasionally, on a strong ebb, there will be breakers in this area. This area should be avoided because of the possibility of going aground or striking submerged jetties and pilings. Also inbound and outbound tugs with tows, freighters, etc., pass close aboard the area and cannot stop for obstructions in the channel; i.e., small vessels.

4. SOUTH JETTY, GUANO ROCK AREA: This is a very dangerous area due to shoals extending out from the South Jetty to the Entrance Channel. Breaks are frequently experienced from Guano Rock Lighted Whistle Buoy 4 extending out to a little past the end of the South Jetty. Extreme care must be exercised in this area at all times, especially on ebb tides.

5. NORTH JETTY SUBMERGED: The North Jetty was extended approximately 200 yards to the West. The outward end of the Jetty is submerged from the visible end of the Jetty out towards Buoy 3. This area should never be crossed. There are breakers in this area most of the time. When departing the Bar northbound, be sure to pass Buoy 3 before turning to the North.

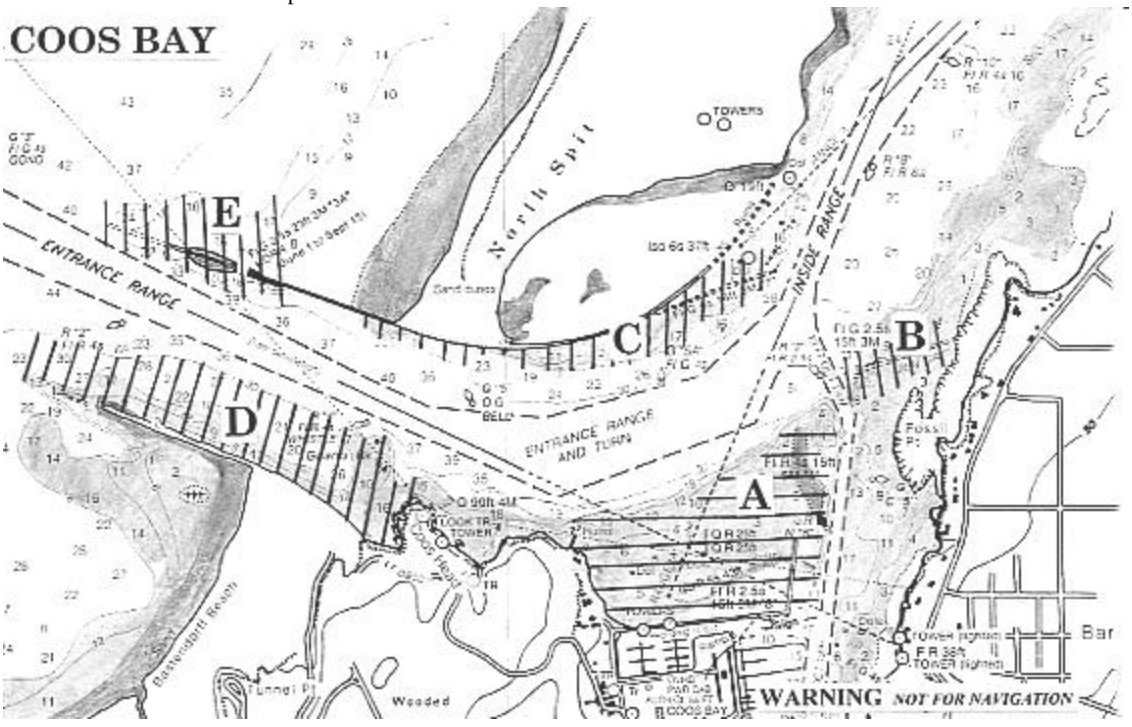
6. AREA NORTH OF BUOY 5: This area can be very dangerous when there are any large swells on the Bar or during ebb tide. Freak breakers are common in this area. Mariners occasionally transit through this area, although it is strongly not recommended.

ROUGH BAR ADVISORY

The Coast Guard has established a Rough Bar Advisory Sign 8 feet above the water on the jetty just north of the Charleston Boat Basin. The two-sided advisory sign is visible from Coos Bay to the north and the South Slough/Charleston Boat Basin to the south.

BAR CONDITION REPORTS

Weather and Bar conditions are recorded twice daily at the Coast Guard Station in Charleston. This recording can be obtained by calling (541) 888-3102. Radio Station KBBR (1330 kHz) broadcasts Bar conditions once each hour during the summer months. Current weather advisories are also posted at the Coast Guard Station in Charleston.



UMPQUA RIVER BAR INFORMATION

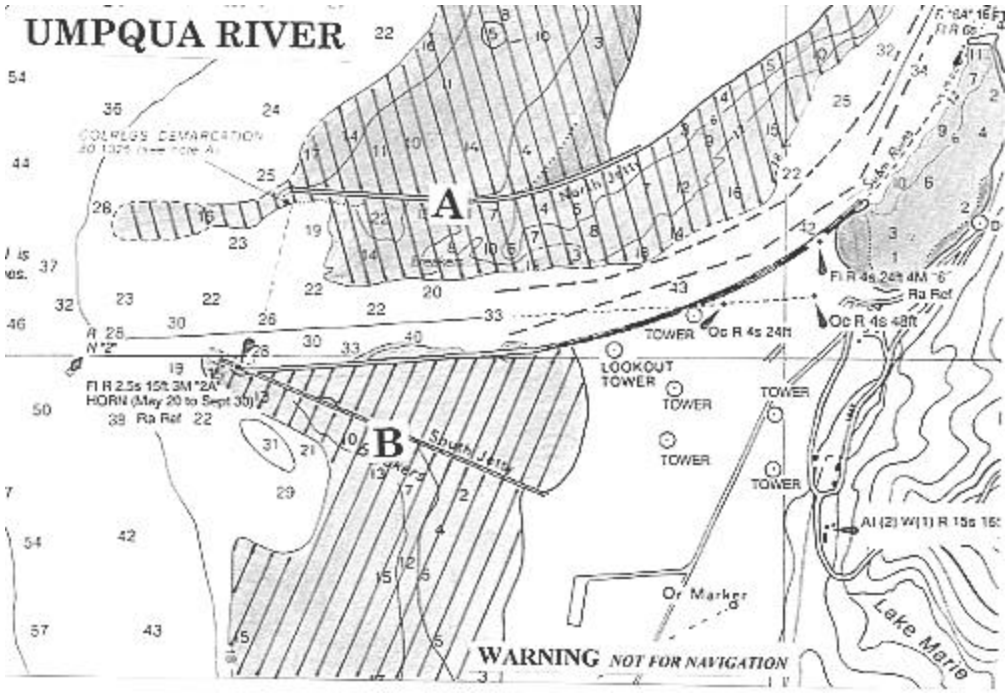
DANGER AREAS (See Chartlet)

1. MIDDLE GROUND AND NORTH SPIT: The North Spit is to your right as you proceed down the Umpqua River, starting from the first rock spar jetty and long pier on the east side of the channel. The North Spit area has small breakers when a swell is running, and gets rougher as you proceed along the north jetty. It is very dangerous because large breakers may come into this area from the Middle Ground. The Middle Ground area extends from the north jetty to the north edge of the main channel and is dangerous because a little swell can create large breakers which can capsize your vessel. Mariners should not linger near the mouth of the river during ebb tide. If your power fails, your boat could be carried out to sea before an anchor would be effective or oars put to work.

2. SOUTH JETTY AND SOUTH JETTY COVE: There is a light and horn on the end of the south jetty. The area south of the south jetty can be very dangerous. Whenever breakers are observed mariners should avoid this area.

BAR CONDITION REPORTS
Bar condition reports for Umpqua River are given hourly during daylight hours by radio station KDUN on 1470 kHz during summer months and can be given by Caost Guard Station Umpqua River via VHF radio, channel 16/22A or by phone at (541) 271-4244.

NOTE: Entrance range may not mark best water.



SIUSLAW RIVER BAR INFORMATION

DANGER AREAS (See Chartlet)

1. SHOAL WATER, NORTHEAST SIDE OF CHANNEL has a depth of 2 to 3 feet of water at high tide.

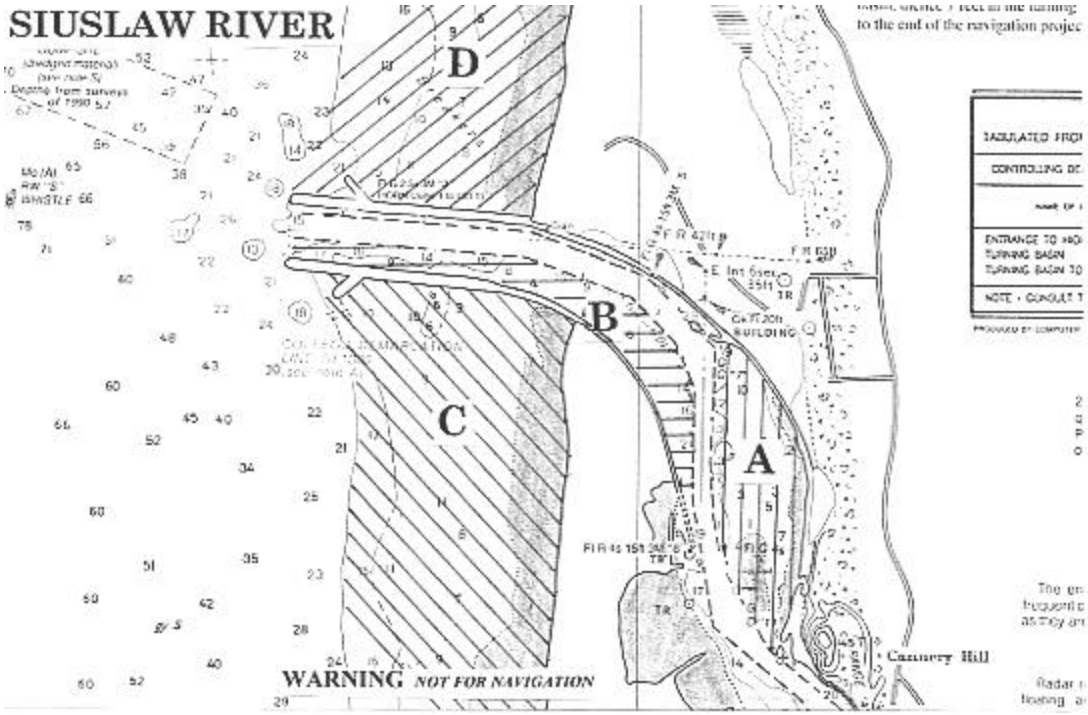
2. SHOAL WATER, SOUTH SIDE OF CHANNEL extends from Can Buoy 7, well inside the bar, almost out to Lighted Gong Buoy 5. Breakers in this area are common, even with a small swell running.

3. OUTER END OF SOUTH JETTY: Breakers are almost always present in this area. When the seas are from the southwest or west, breakers may extend out near the Approach Lighted Whistle Buoy "S".

4. OUTER END OF NORTH JETTY: Breakers are almost always present in this area. When the seas are from the west, the breakers may extend all the way out near the Approach Lighted Whistle Buoy "S".

SIUSLAW RIVER BAR
Siuslaw River Bar has a very narrow channel extending out past the jetties. Unlike the larger bars on the Oregon Coast, the Siuslaw River Bay may be rendered impassable for small boats by a moderate swell, particularly at ebb tide. Mariners should use extreme caution when operating near this bar.
NOTE: The entrance range may not mark best water due to the changing conditions of the bar.

ROUGH BAR ADVISORY SIGNS
At Siuslaw River the sign is mounted on the Coast Guard lookout tower and faces 150° True.



YAQUINA BAY BAR INFORMATION

DANGER AREAS (See Chartlet)

1. SOUTH JETTY AND GROINS IN RUINS: The groins or short jetties along the south side of the entrance are completely submerged at high tide, but are bare at other stages. In addition, there are submerged rocks along the entire length of the jetty, which are close to the surface at all times. Never cross over the submerged end and do not hug the jetty on either side. Remain in the channel entering and leaving the river, so that if your engine should fail, you will have time to anchor before the current or wind sweeps you onto the rocks.

2. NORTH JETTY: This jetty affords excellent protection from northerly winds. However, the same caution should be exercised in running close to it as with the South Jetty. Stay well clear of the end of the North Jetty, since there is danger of shoalwater breakers at the extreme end. Remain in the channel outbound until you have passed Entrance Buoy 3, at the south end of Yaquina Reef. This applies to entering the river as well. This jetty is now shorter than its original length causing turbulent and aerated water around the jetty and into the channel. Mariners should anticipate a north to south beach current during the summer months and a south to north current during the winter months. The beach current may be intensified close to the tips of the jetties. Note: The current can be effected by severe weather and extreme tidal changes.

3. SOUTH REEF: This reef can be considered an extension of Yaquina Reef and is equally dangerous due to the same surf conditions as are encountered on Yaquina Reef. When going south, continue out of the channel to Yaquina Bay Entrance Buoy "YB" before turning south.

4. YAQUINA REEF: This reef is always extremely dangerous, even when the winds are light and few breakers are seen. A large swell coming from seaward can cause a tremendous breaker on this reef with little or no warning. Never fish close to the reef and do not turn north between the end of the North Jetty and approximately 200 yards WSW.

5. GENERAL: The Army Corps of Engineers have a disposal site for dredge spoils approximately 600 yards north of Buoy 1 and 1000 yards west of Seasonal Buoy 3. During inclimate weather swells may be larger in this area due to reduced depths. Mariners are encourage to proceed to the Yaquina Bay Entrance Buoy "YB" before turning north when departing for sea.

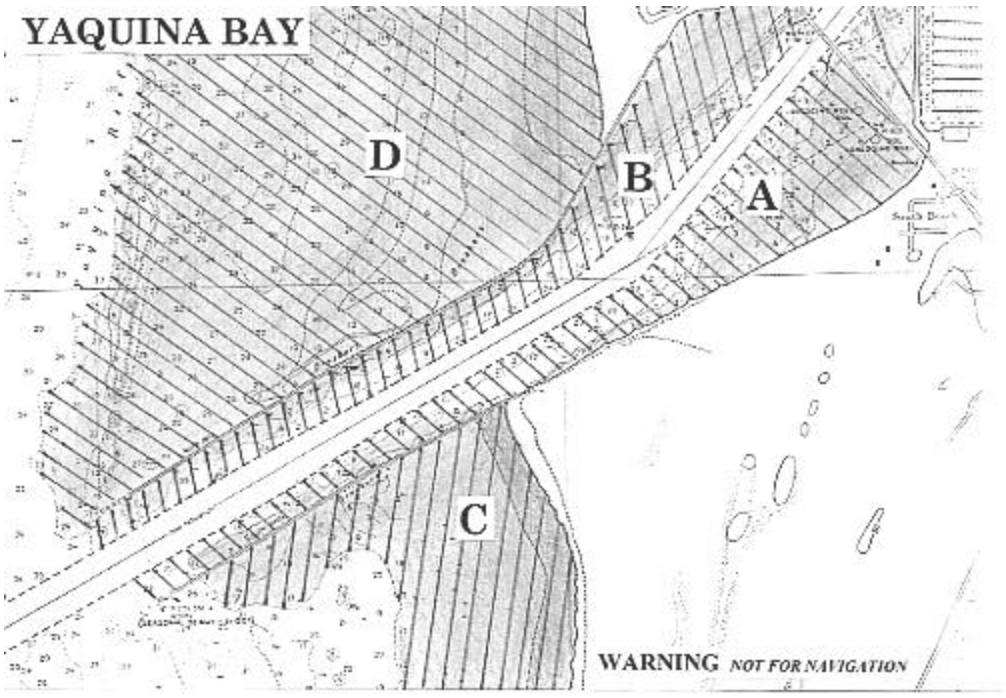
ROUGH BAR WARNING SIGNS

At Yaquina Bay the sign is on the west end of the Coast Guard pier and faces 280° True.

BAR CONDITION REPORTS

Given by Radio Station KNPT -- 1310 kHz.

1. Summer -- Three times daily and upon Coast Guard Request.
2. Winter -- Two times daily and upon Coast Guard Request.



DEPOE BAY BAR INFORMATION

DANGER AREAS (See Chartlet)

1. NORTH REEF: Once a boat has cleared the entrance, any waters to the north are hazardous until Red Bell Buoy 2 is reached. The sea breaks from the northwest and southwest at the same time so this area must be avoided at all times.

2. SOUTH REEF: Better known as "Flat Rock", this area lies just south of the channel. Breakers are almost always present in this area. Boats coming from the south should never use this area as a short cut to the channel. This area should be avoided by boats at all times.

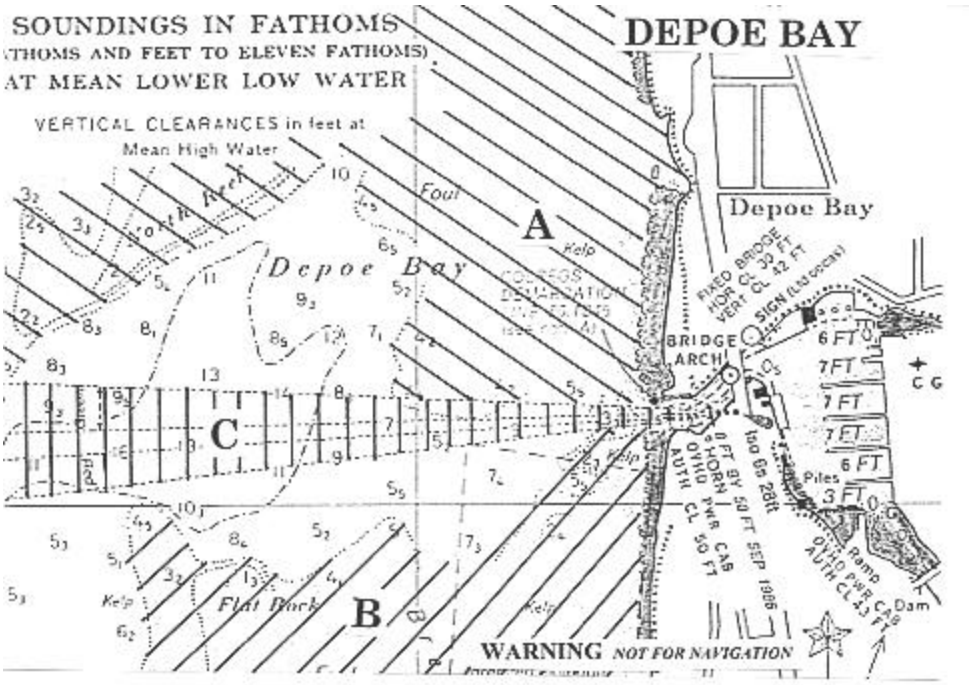
3. CHANNEL FROM RED BELL BUOY 2 LANDWARD (APPROXIMATELY 1000 YARDS): Because the North and South Reefs are so close to the channel, this area sometimes becomes very hazardous. During adverse conditions, breakers from the North Reef will cross the channel and run into the entrance. When this condition exists, it is better to standby at the entrance buoy until the Coast Guard either advises that it is safe to enter, or is there to escort boats in. An important rule at Depoe Bay: **NEVER FISH BETWEEN THE ENTRANCE AND RED BELL BUOY 2!**

DEPOE BAY CHANNEL

Depoe Bay Channel has been widened from 35 feet to 50 feet to make passing less dangerous. The channel has a depth of 7 feet at mean low water. Under normal conditions, small craft can enter and leave the harbor with little difficulty. Even under good conditions, however, the area between the breakwater and the bridge should be navigated with extreme caution. The channel has a "dog leg" under the bridge that obstructs a vessels view of inbound or outbound vessels. The local charter fleet monitors VHF channel 80 and it is standard practice for vessels to make a broadcast this channel when inbound or outbound. Under adverse conditions, only mariners thoroughly familiar with the channel should attempt to enter this harbor. Depoe Bay has a flood lighted entrance. It should not be entered at night, however, unless the boat operator is well acquainted with the channel entrance and range lights.

ROUGH BAR ADVISORY

The Coast Guard has established a rough bar warning sign 25 feet above the water, visible by outbound vessels, on a building on the north side of the entrance channel. Vessels are encourage to check with Coast Guard Station Depoe Bay for current bar conditions by calling (541) 765-2122 for an updated recording or contact the station via VHF radio.



TILLAMOOK BAY BAR INFORMATION

DANGER AREAS (See Chartlet)

1. BAR AREA: The entire area between the beach and the 20-foot curve is BAR AREA and breaks on the ebb tide. The water runs out from 4 to 6 knots on the average and is very strong. Boats proceeding out should stop in the channel eastward of the seaward end of the breakwater and carefully evaluate the bar. Between November and April all vessels should avoid the area around Bell Buoy 1. This is extremely hazardous. The bar area is consistently changing.

2. NORTH JETTY: Approximately 150 feet of the seaward end of the North Jetty is submerged. This, and all areas immediately adjacent to the jetty are extremely hazardous and should be avoided. About the last 150 yards of the outer tip of the North Jetty is curving towards the Tillamook Bay Channel. Do not proceed north or south until you are well clear of the submerged jetties (approximately 250-350 feet seaward of the jetty tips.)

3. SOUTH JETTY: Approximately 300 feet of the seaward end of the south jetty is submerged. Extreme caution must be exercised when transiting the area. Junction Gong Buoy "S" has been established until the tip of the south jetty is repaired. Since this buoy sits adjacent to a shoal, surf conditions may be experienced in the immediate area surrounding the buoy and westward of it.

TILLAMOOK BAY CHANNEL

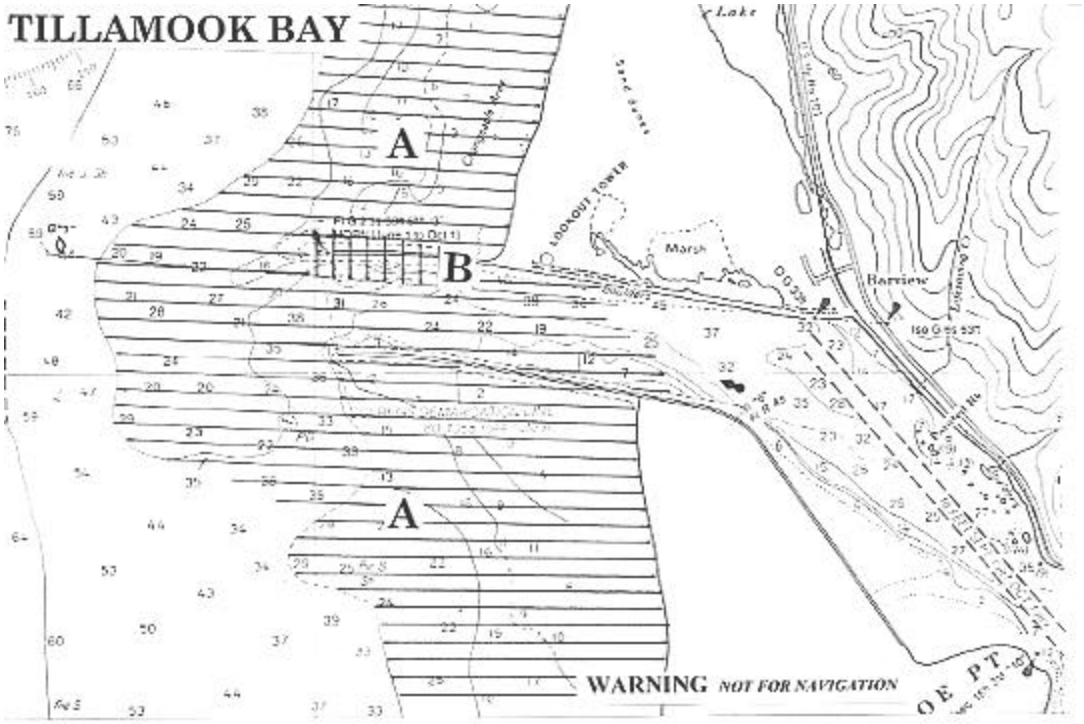
Tillamook Bay Channel lies just south of the North Jetty. Boaters are urged to navigate with extreme caution as this channel changes constantly. The Sector Light marks the correct location of the navigable channel only when between the jetties. The sector light should not be used to make an approach to the Tillamook Bay Bar since it runs directly over some hazardous areas west of the jetty tips. Most local mariners prefer to transit in and out of Tillamook Bay by following the "south hole" which is the deep water area that runs north and south, just west of the end of the submerged rocks on the south jetty.

BAR CONDITION REPORTS

Bar condition and weather reports for Tillamook Bay can be obtained by contacting Coast Guard Station Tillamook Bay on VHF-FM channel 16. KTIL reports are only given in the morning (once per day) and only in the summer time. With conditions changing frequently on the bar this morning radio report is only pertinent for the period that the report is given.

ROUGH BAR WARNING SIGN

A small boat rough bar warning sign is located just west of the Coast Guard boathouse. A second sign is mounted on the Coast Guard Tower, which is located on the North Jetty. If the yellow lights on these signs are flashing, a restriction has been placed on recreational boats crossing the bar. To see if this restriction affects your vessel, please contact Coast Guard Station Tillamook Bay on VHF-FM channel 16 or call (503) 322-3531.



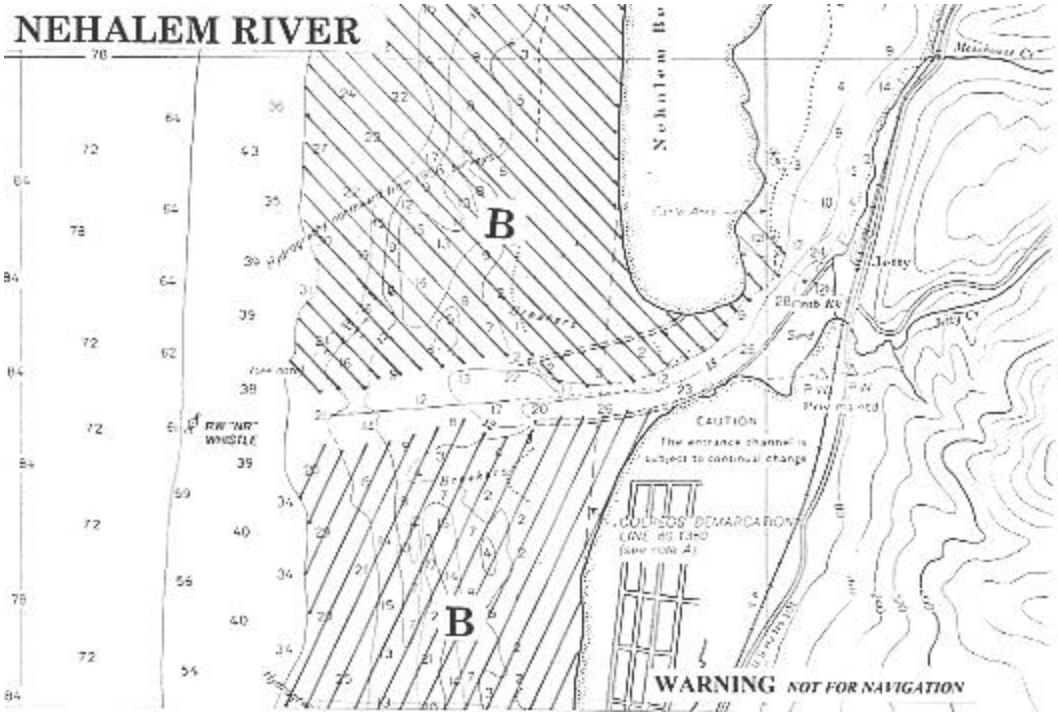
NEHALEM RIVER INFORMATION

DANGER AREAS (See chartlet)
The Nehalem River entrance lies between two rebuilt jetties. The best water is close to the South Jetty. The channel seaward of the jetties is continually shifting and local knowledge is needed to cross it safely. The privately maintained range markers do not necessarily show the exact channel.

1. CRAB ROCK is located about 150 yards southwest of Jetty Fisheries Resort docks and is a hazard to small boats when it is covered by water.

2. BAR AREA: The entire area between the beach and the 30-foot curve is BAR AREA and breaks on the ebbing current. The safest channel across the bar is subject to frequent change. Boats proceeding out should stop just inside the entrance and carefully evaluate the bar. If a decision is made to cross, pick the calmest area and proceed, but do not attempt to turn around if the bar is breaking.

BAR CONDITION REPORTS
Radio Station KTIL (1590 kHz) gives bar condition reports twice daily and when conditions change.



COLUMBIA RIVER BAR INFORMATION

DANGER AREAS (See Chartlet)

1. CHINOOK SPUR, UPPER, LOWER AND MIDDLE SAND ISLAND SPURS are built on two rows of staggered pilings. Currents flowing through these pilings attain a velocity of up to 5 knots. A boat which becomes disabled or is maneuvered in such a way as to come in contact with any of these spurs is almost sure to suffer damage damage or become trapped against them and turn over. Even large boats have been capsized in these areas. Give these spurs a wide berth and never get close to them on the up-current side.

2. CLATSOP SPIT is the most unpredictable area on the river entrance. During flood currents and slack water it may be calm with only a gentle swell breaking far in on the spit. Yet 5 or 10 minutes later, when the current has started to ebb, it can become extremely hazardous with breakers extending far out toward the channel. You should remain north of the red buoys in this area, particularly just before or during the ebb. The South Jetty has a section broken away on the outer end. The broken section is under water close to the surface. Boats should use extra caution in the area from the visible tip of the Jetty out to Buoy "2SJ". Peacock and Clatsop Spits are called the graveyard of the Pacific for good reason.

3. JETTY A which is southeast of Cape Disappointment, presents a particular danger when the current is ebbing. Water flowing out of the river, is deflected by the jetty and frequently the currents reach 8 knots, often causing waves up to 8 feet high. Boats proceeding into Baker Bay West Channel make very little speed against the swift current and are exposed to the rough water or surf for long periods of time. The shallow sandy area should be avoided by small craft when heavy seas are present because of the surf which breaks on the beach.

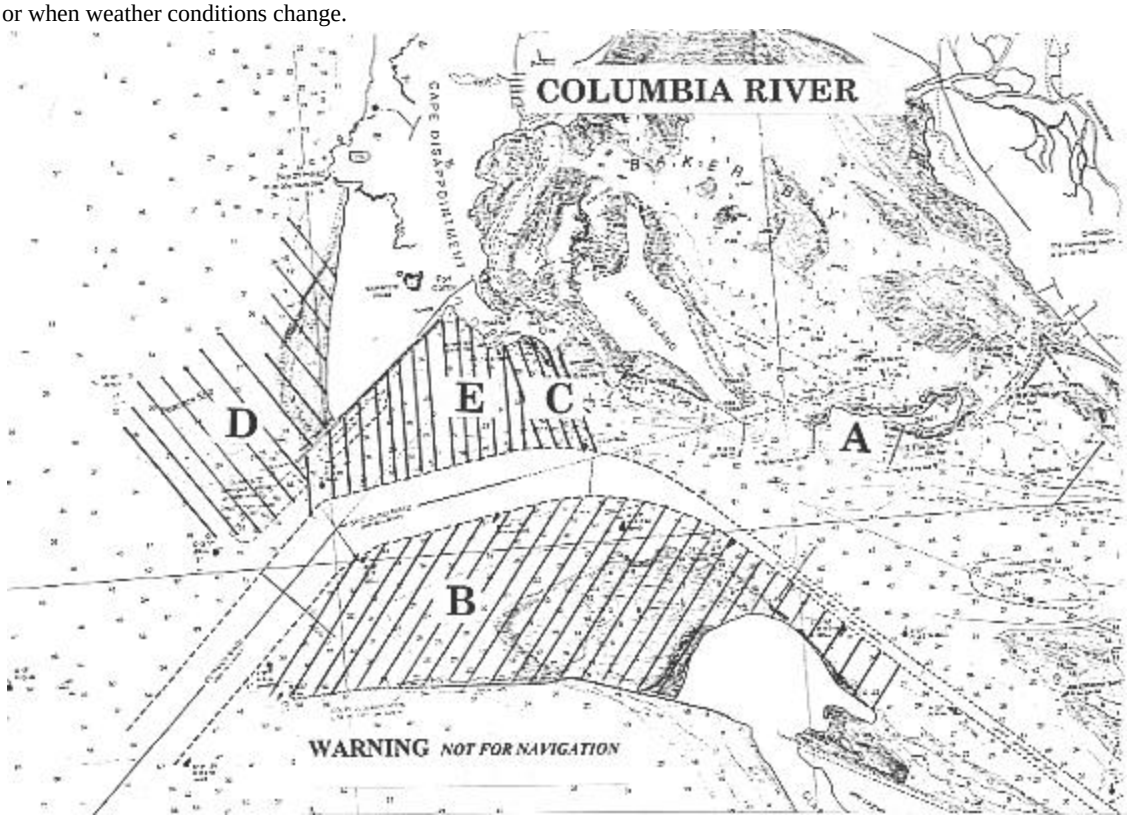
4. PEACOCK SPIT: Breakers are heavy in all types of current. Sport craft leaving the river should never be on the north side of the green buoys. When rounding Peacock Spit, give the breakers at least a half-mile clearance. Many times unusually large swells coming in from the sea suddenly commence breaking 1/4 to 1/2 mile outside the usual break on the end of the north jetty.

5. MIDDLE GROUND: This is a shallow area between the North Jetty and main Ship Channel that is subject to breaking seas when swells as small as 4 feet are present. Conditions here can change in minutes with tidal current changes.

NO ROUGH BAR ADVISORY SIGN ESTABLISHED.

BAR CONDITION REPORTS

Radio Stations KVAS (1230 kHz) and KAST (1370 kHz) gives bar condition reports 15 minutes before and after the hour. In addition Coast Guard Station Cape Disappointment can be contacted via VHF-FM Channel 16 for conditions of the bar. . The Coast Guard also maintains a recorded bar and weather forecast report at (360) 642-3565. The recording is updated every 3 hours or when weather conditions change.



WILLAPA BAY

Most of the waters in the Willapa Bay entrance are "**DANGEROUS AREAS**". This is due to extensive shoal water, effects of ocean wind and swells, and the fact that bars and shoals are constantly changing. The sea can break into dangerous surf at any time in this area. If your boat should swamp, help may not be able to reach you because the sea breaks into shoal water. The channel into Willapa Bay is subject to frequent changes. You should only attempt to cross Willapa Bay Entrance if you are intimately familiar with the entrance. Even the most recent chart of Willapa Bay will most likely not show the current shoals and channels. Shoaling at the entrance to Willapa Bay is constantly shifting. **The nearest Coast Guard Station that can respond to distress calls is over one hour away to the north in Grays Harbor.**

DANGER AREAS (See Chartlet)

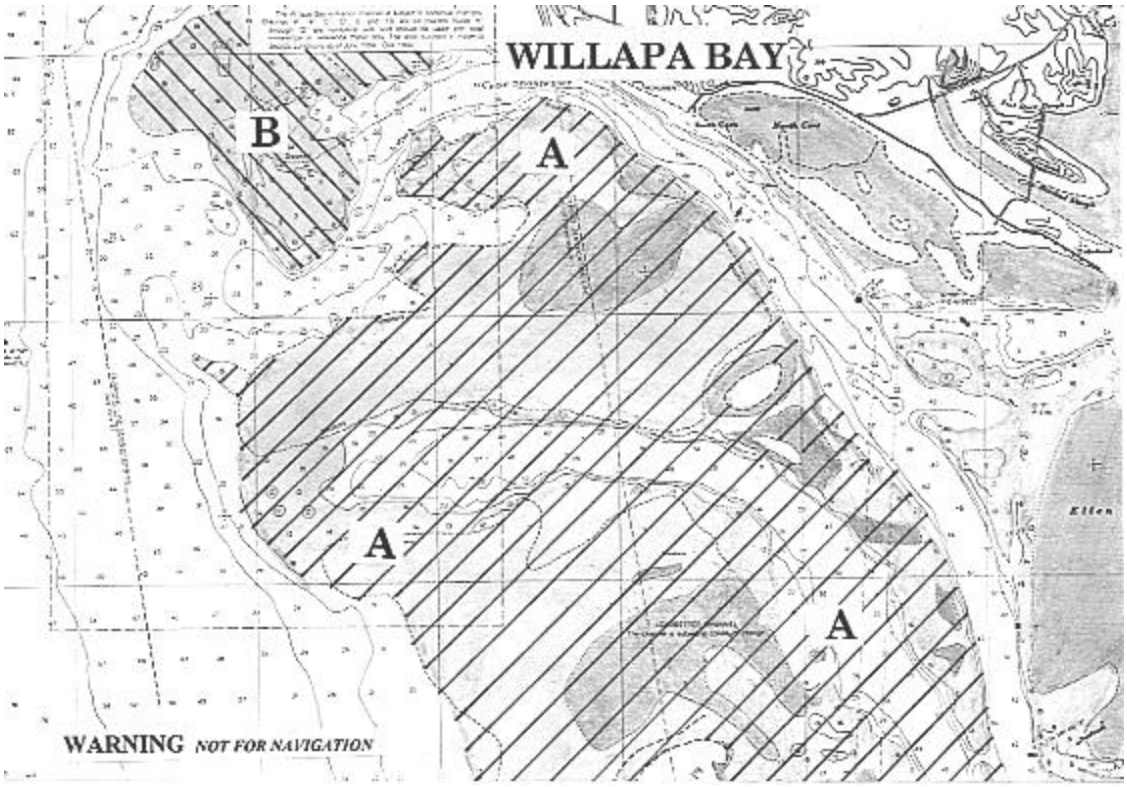
1. SOUTH SPIT is located on your left as you leave Willapa Bay. During ebb currents it generally breaks with swells 4 to 6 feet high. In addition to the danger of capsizing in this area, there is the added hazard of fouling your propeller on one of the many crab pot floats set by fishermen.

2. NORTH SPIT lies to your right as you leave Willapa Bay. This area is dangerous due to shallow water and there is generally an 8 to 10 foot swell running. During ebb currents it is usually breaking. Great caution should be used while fishing near this area as the drift rate is very fast and the turbulence may cause you to capsize.

3. BUOY SYSTEM The buoy system that serves the entrance to Willapa Bay is only meant to serve as a general guide. The buoys are yellow in color, not red and green because they are special purpose buoys. Because of the quickly shifting shoals, the buoys may or may not mark the best channel. With the frequent and severe storms that occur, it is normal for one or more of the buoys to break lose. Upriver from the North Cove area, the traditional red and green buoy system comes into effect.

NO ROUGH BAR ADVISORY SIGN ESTABLISHED.

BAR CONDITION REPORTS
Radio Station KAPA (1340 kHz) gives bar condition reports Monday through Saturday at 6:30 a.m., 9:00 a.m., 3:00 p.m., and 6:00 p.m., and on Sundays at 8:00 a.m., 12:00 noon and 4:00 p.m.



GRAYS HARBOR BAR INFORMATION

DANGER AREAS (See Chartlet)

1. OUTER WHITCOMB FLATS is to your right as you leave Westport. This is a shoal area, and breakers sometimes exist, causing a dangerous situation.

2. THE MIDDLE GROUND is shoal water and a possible danger area when breakers are present. Stay to the south of this area when crossing the bar.

3. THE SOUTH JETTY is submerged from the exposed end to about 4,500 feet seaward. Usually the sunken rocks are not visible and the danger of grounding is always present. In other than very calm weather conditions breakers exist on the Sunken Jetty, creating the possibility of capsizing or grounding. The sunken or seaward end of the jetty is marked by Lighted Buoy 8. Always avoid the area between Lighted Buoy 8 and the raised or exposed end of the South Jetty. This area has caused most of the boating mishaps on the bar in recent years.

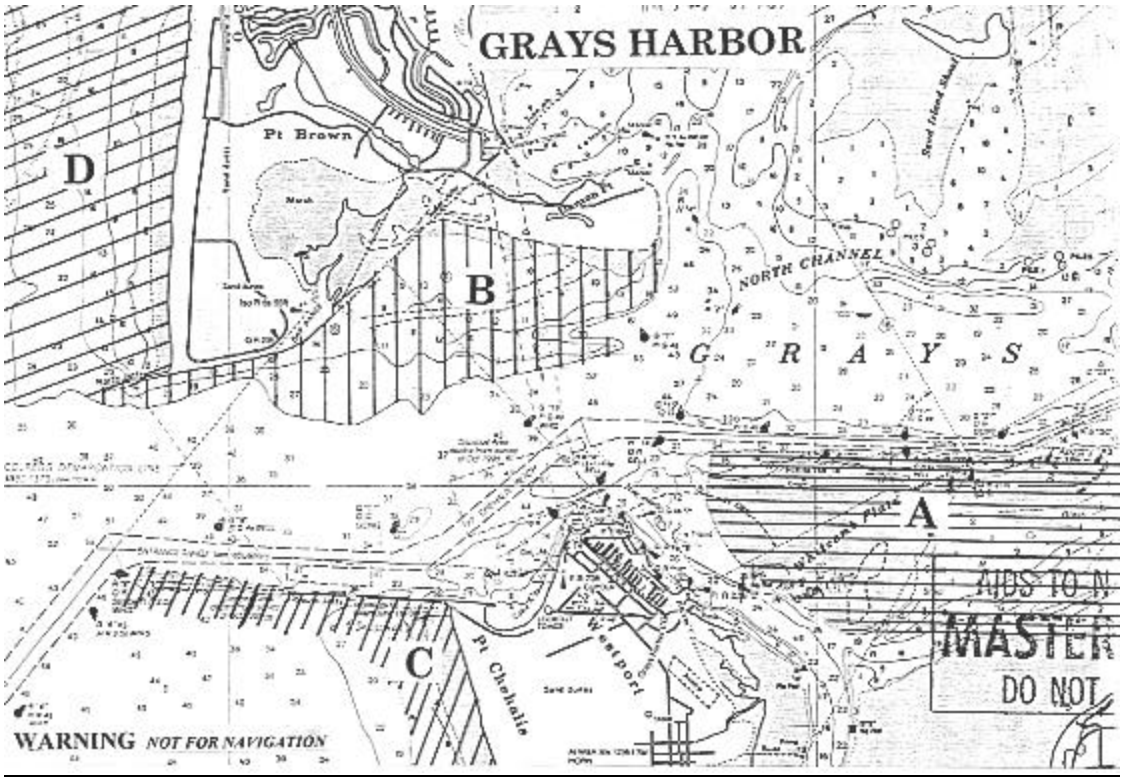
4. THE NORTH JETTY and the area north of it are dangerous because of shallow water and breaking surf.

ROUGH BAR WARNING SIGNS

A small boat rough bar warning sign is located on the point of land northwest of the Islander Motel and Restaurant. This sign faces 070° True.

BAR CONDITION REPORTS

For current bar conditions vessels are encourage to call Coast Guard Station Grays Harbor weather line at (360) 268-0622. Bar information is updated periodically throughout the day and as conditions change. The station will also broadcast any bar restrictions on VHF channel 16 and 22. The station can also be reached at (360) 258-0121 for the most up to date bar report.



QUILLAYUTE RIVER BAR INFORMATION

DANGER AREAS (See Chartlet)

1. ROCK DIKE AND NORTH SIDE OF JAMES ISLAND: A rock dike, exposed at low water, runs from the northeastern side of James Island northeastward to the beach. It should be given a wide berth because of the danger of being swept upon it by river currents. The area northward of James Island is fouled with many submerged rocks and should be avoided.

2. OUTER END OF THE BREAKWATER: The end of the breakwater is slowly settling and the area around it is shoaling which causes breakers and should be avoided.

3. WASH ROCK: Wash Rock, 4 feet above water at mean low tide, lies about 55 feet off the southeast corner of James Island. In calm weather it can be passed fairly close, but care must be taken not to hit it. In rough weather there is considerable turbulence around it, which will affect a boat's ability to maneuver.

4. AREA EAST OF BREAKWATER: This area is very shallow and breaks in almost all weather. It should be avoided.

QUILLAYUTE RIVER ENTRANCE

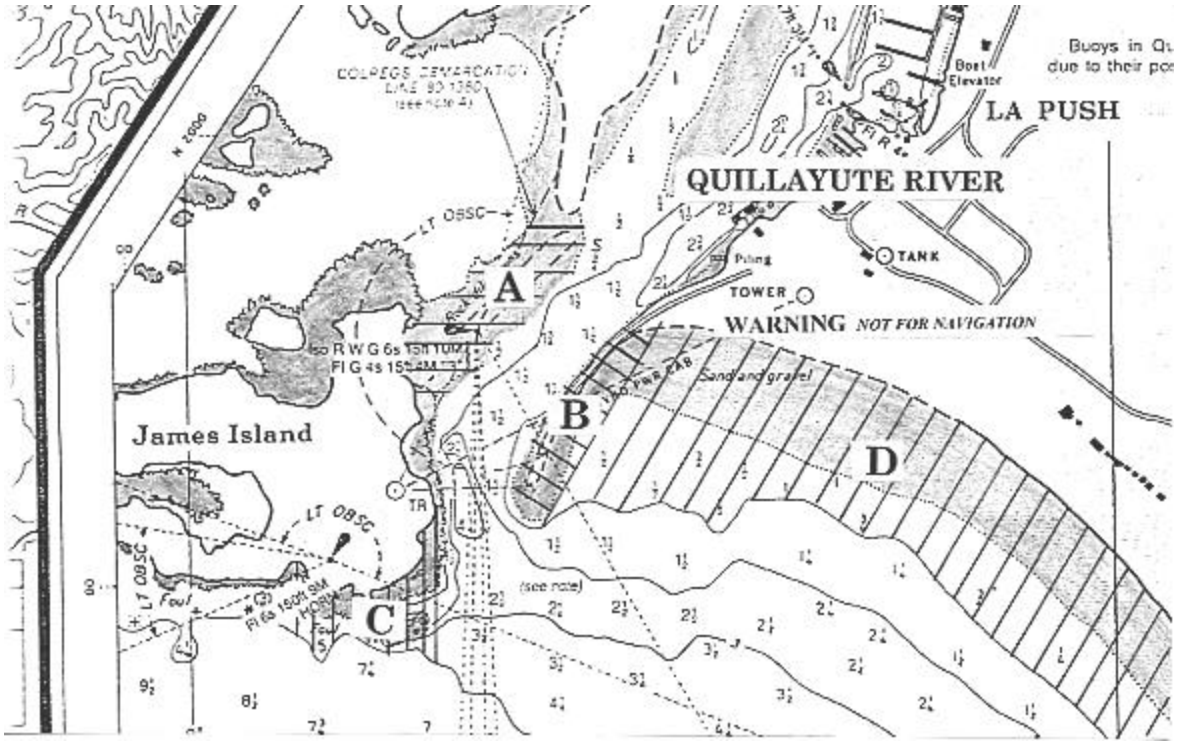
Quillayute River Entrance lies between James Island and a rock breakwater. The depth is about ten feet but is subject to extreme variations. The usual width at the entrance is about 70 feet. While inside the entrance (north of the breakwater) stay on the jetty side of mid-channel and keep a sharp eye out for Indian fish nets especially between mid August and early June. From May 1 to October 15, seasonal buoys mark the channel from the entrance of the river to the boat basin. Also during the summer months there is very little danger of breakers on the bar except when a storm is passing through. The entrance to the river is hazardous after dark and entering should not be attempted unless one is familiar with the area. The entrance is marked by Quillayute River Direction Light which shows white, red, and green lights. The white light marks the centerline of the channel. If a mariner moves to the port or starboard side of the channel the white light will change to either red or green depending on which side of the channel the boat is tending toward (see the Coast Guard Light List, Volume VI for a better description).

ROUGH BAR WARNING SIGN

At Quillayute River the rough bar warning sign is mounted on the northwest corner of the Coast Guard boathouse facing 016° True.

BAR CONDITION REPORTS

Bar condition reports for Quillayute River are given by Radio Station KVAC -- 1490 kHz at 6:00 a.m., 12:00 noon, 5:00 p.m. and when conditions change. Bar conditions are also available by calling (360) 374-6993. This information is updated every three hours from sunrise to sunset.



CHAPTER IV

COMMUNICATIONS

COMMUNICATIONS ON 2182 kHz AND 156.8 MHz

The authorized use of 2182 kHz and VHF-FM Channel 16 (156.8 MHz) is limited to distress, safety, and calling communications. The Coast Guard and the Federal Communications Commission (FCC) are renewing efforts to reduce the congestion and misuse of these frequencies. Mariners are reminded that the following operating procedures are in effect:

1. Both 2182 kHz and 156.8 MHz must be continuously monitored unless you are participating in the Vessel Traffic System or exchanging communications on another frequency.

2. Do not attempt to make routine radio calls on 2182 kHz or 156.8 MHz while distress communications are in progress.

3. Switching to an appropriate working frequency is required once communications are established on 2182 and 156.8 MHz.

4. Efforts to establish communications must not exceed 30 seconds. If contact is not made, wait at least 2 minutes before repeating a call. When a called station does not reply to a call sent three times at intervals of 2 minutes, the calling must cease and must not be renewed until after an interval of 15 minutes; however, if there is no reason to believe that harmful interference will be caused to other communications in progress, the call sent three times at intervals of 2 minutes may be repeated after a pause of not less than 3 minutes. In event of an emergency involving safety, the provisions of this paragraph do not apply.

5. The use of unnecessary phrases such as "Do you read me?" should be avoided. Limit the use of the phonetic alphabet to poor transmission conditions.

For further information write to: Federal Communications Commission
Field Operations Bureau, Seattle Field Office
11410 NE 122nd Way, Suite 312
Kirkland, WA 98034
Or call: (888) 225-5322

COMMUNICATIONS ON 2670 kHz AND 157.1 MHz

The voice frequencies of 2670 kHz and 157.1 MHz (VHF-FM Channel 22A) are Coast Guard frequencies reserved for Coast Guard Marine Information Broadcasts and for use as Coast Guard/non-government vessel liaison frequencies. The use of 2670 kHz and 157.1 MHz by non-government licensees is restricted exclusively to communications with the Coast Guard. Coast Guard stations do not guard these frequencies, however, they can be shifted to these frequencies after an initial call on 2182 kHz or 156.8 MHz (VHF-FM Channel 16) as appropriate.

VESSEL BRIDGE-TO-BRIDGE RADIOTELEPHONE REGULATIONS

Bridge-to-bridge radiotelephone regulations are contained in 33 Code of Federal Regulations Part 26, and are included in the Coast Guard publication Navigation Rules, International-Inland, available from the U.S. Government Printing Office. Briefly, the regulations provide that all of the following vessels must maintain a continuous listening watch on VHF-FM Channel 13 (156.65 MHz) for the exchange of navigational safety information when underway:

1. 300 gross tons and over

2. 100 gross tons and over carrying passengers for hire

3. 26 feet in length or more while engaged in towing

4. All dredges and floating plants engaged in or near a channel or fairway in operations likely to restrict or affect navigation of other vessels

Although the use of bridge-to-bridge radiotelephones contributes significantly to navigation safety, mariners are cautioned that not all vessels may be able to respond to calls on 156.65 MHz due to technical difficulties with their equipment or interference from other "high power" transmissions. Mariners are reminded that these regulations in no way supersede their statutory responsibility under the Rules of the Road.

NOTE: Due to the sheer number of vessels using 156.65 MHz (Channel 13) for other than bridge-to-bridge communications, mariners are urged to make sure their use of Channel 13 is necessary and, if so, use only low power. Mariners are urged to use whistle signals to request bridge openings in the Lake Washington Ship Canal (see Chapter XI for more bridge information).

BROADCAST NOTICES TO MARINERS (BNM)

The United States Coast Guard broadcasts marine safety information on VHF-FM Channel 22A (157.1 MHz) and on 2670 kHz single sideband (SSB). These safety broadcasts contain information such as notices to mariners, storm warnings, distress warnings, and other pertinent information that is vital for safe navigation.

Following a preliminary call on VHF-FM Channel 16 (156.8 MHz) and/or 2182 kHz (SSB), mariners are instructed to shift to VHF-FM Channel 22A simplex (157.1 MHz) or 2670 kHz (SSB) respectively. Operators of vessels who plan to transit U.S. waters and who do not have VHF radios tunable to the United States Channel 22A are urged to obtain the necessary equipment. As a minimum, they should continually monitor 2182 kHz (SSB) for announcements of U.S. Coast Guard marine safety broadcasts on 2670 kHz (SSB).

THIRTEENTH DISTRICT BROADCAST NOTICES TO MARINERS

The 13th Coast Guard District Stations listed below announce all broadcasts (call-up) on 2182 kHz and/or 156.80 MHz (VHF-FM Channel 16) and shift to 2670 kHz and/or 157.10 MHz (VHF-FM Channel 22) where the complete broadcasts are read. These stations broadcast Notice to Mariners information upon receipt and on the following scheduled times and frequencies:

STATION	**BROADCAST TIME**	**FREQUENCY USED**
Group North Bend, OR	1000 PST & 2200 PST	2670 kHz & 157.10 MHz
Group Astoria, OR	1000 PST & 2200 PST	2670 kHz & 157.10 MHz
Group Portland, OR	0945 PST	157.10 MHz
Group Port Angeles, WA	1015 PST & 2215 PST	2670 kHz & 157.10 MHz
Group Seattle, WA	1030 PST & 2230 PST	157.10 MHz

BROADCAST NOTICES TO MARINERS - REQUEST FOR COMMENTS

Mariners are invited to forward their comments on the performance of the Local Notice to Mariners Broadcast System to Commander (oan), Thirteenth Coast Guard District, 915 Second Avenue, Seattle, WA 98l74-1067 and/or Commandant (G-OPN-2), U.S. Coast Guard Headquarters, Washington, D.C. 20593 with special reference to the following:

1. Subject matter
2. Readability of broadcasts
3. Schedule of broadcasts

NAVTEX

NAVTEX is a standard international method of broadcasting notices to mariners and marine weather forecasts using small, low cost receivers designed to be installed in the pilothouse of a vessel. NAVTEX receivers screen incoming messages, inhibiting those which had been previously received or are of a category not of interest to the user, and print the rest on adding machine size paper. NAVTEX not only provides marine information previously available only to those knowledgeable in morse code, but also allows any mariner who cannot man a radio full time to receive safety information at any hour. All NAVTEX transmissions are made on 518 kHz. Mariners who do not have NAVTEX receivers but have SITOR radio equipment can also receive these broadcasts by operating it in the FEC mode and tuning to 518 kHz.

The Coast Guard broadcasts NAVTEX messages from Boston, MA; Portsmouth, VA; Miami, FL; New Orleans, LA; San Juan, PR; Guam; Kodiak, AK; Adak, AK; San Francisco, CA; Long Beach, CA; and Astoria, OR. Broadcasts are as follows:

BOSTON, MA (NMF):
Identification (B1): F
Schedule (UTC): 0445, 1045, 1645, 2245

MIAMI, FL (NMA
Identification (B1): A
Schedule (UTC): 0000, 0600, 1200, 1800

SAN JUAN, PR (NMR):
Identification (B1): R
Schedule (UTC): 0415, 1015, 1615, 2215

GUAM (NRV):
Identification (B1): V
Schedule (UTC): 0100, 0700, 1300, 1900

PORTSMOUTH, VA (NMN):
Identification (B1): N
Schedule (UTC): 0130, 0730, 1330, 1930

ORLEANS, LA (NMG):
Identification (B1): G
Schedule (UTC): 0300, 0900, 1500, 2100

HONOLULU, HI (NMO):
Identification (B1): O
Schedule (UTC): 0040, 0640, 1240, 1840

KODIAK, AK (NOJ):
Identification (B1): J
Schedule (UTC): 0300, 0900, 1500, 2115

ADAK, AK (NOJ):
Identification (B1): X
Schedule (UTC): 0000, 0500, 1200, 1745

SAN FRANCISCO, CA (NMC):
Identification (B1): C
Schedule (UTC): 0400, 1000, 1600, 2200

LONG BEACH (NMC):
Identification (B1): Q
Schedule (UTC): 0445, 1045, 1645, 2245

ASTORIA, OR (NMC):
Identification (B1): W
Schedule (UTC): 0130, 0730, 1330, 1930

Information broadcast over NAVTEX include offshore weather forecasts, offshore marine advisory warnings, search and rescue information, and navigational information that applies to waters from the line of demarcation (separating Inland Rules from COLREG Rule waters) to 200 miles offshore. Navigational information that affects the safety of navigation of deep draft (15 feet or more) vessels within the U.S. Inland Rule waters will also be included. Gulf stream location is also included from Miami and Portsmouth. Coastal and high seas weather forecasts are not being broadcast over NAVTEX. The Safety of Life at Sea Convention, as amended in 1988, requires vessels regulated by that convention to carry NAVTEX receivers.

VHF MARINE RADIO INFORMATION

The FCC Maritime Mobile Services website, http://wireless.fcc.gov/marine/ contains information covering the basics of using and licensing a VHF radio on a boat. For more information contact the FCC at (888) 225-5322.

Marine VHF Radio Channels

The chart below summarizes a portion of the Federal Communications Commission rules 47 CFR 80.371(c) and 80.373(f).

Type of Message	Appropriate Channel(s)
DISTRESS SAFETY AND CALLING - Use this channel to get the attention of another station (calling) or in emergencies (distress and safety).	16
INTERSHIP SAFETY - Use this channel for ship-to-ship safety messages and for search and rescue messages and ships and aircraft of the Coast Guard.	6
COAST GUARD LIAISON - Use this channel to talk to the Coast Guard (but first make contact on Channel 16).	22
NONCOMMERCIAL - Working channels for voluntary boats. Messages must be about the needs of the ship. Typical uses include fishing reports, rendezvous, scheduling repairs and berthing information. Use Channels 67 and 72 only for ship-to-ship messages.	9[6], 68, 69, 71, 72, 78, 67[7].
COMMERCIAL - Working channels for working ships only. Messages must be about business or the needs of the ship. Use channels 8, 67, 72 and 88 only for ship-to-ship messages.	7, 8, 9, 10, 11, 18, 19, 67[7], 79, 80, 88[1]
PUBLIC CORRESPONDENCE (MARINE OPERATOR) - Use these channels to call the marine operator at a public coast station. By contacting a public coast station, you can make and receive calls from telephones on shore. Except for distress calls, public coast stations usually charge for this service.	24, 25, 26, 27, 28, 84, 85, 86, 87, 88[2]
PORT OPERATIONS - These channels are used in directing the movement of ships in or near ports, locks or waterways. Messages must be about the operational handling movement and safety of ships. In certain major ports, Channels 11,12 and are not available for general port operations messages. Use channel 20 only for ship-to-coast messages. Channel 77 is limited to intership communications to and from pilots	1[5], 12, 14, 20, 65, 66, 73, 74, 77
NAVIGATIONAL - (Also known as the bridge-to-bridge channel.) This channel is available to all ships. Messages must be about ship navigation, for example, passing or meeting other ships. You must keep your messages short. Your power output must not be more than one watt. This is also the main working channel at most locks and drawbridges.	13, 67
MARITIME CONTROL - This channel may be used to talk to ships and coast stations operated by state or local governments. Messages must pertain to regulation and control, boating activities, or assistance to ships.	17
DIGITAL SELECTIVE CALLING - Use this channel for distress and safety calling and for general purpose calling using only digital selective calling techniques.	70

WEATHER - On these channels you may receive weather broadcasts of the National Oceanic and Atmospheric Administration. These channels are only for receiving. You cannot transmit on them.	Wx-1 162.55 Wx-2 162.4 Wx-3 162.475

Channel Superscript Translation

1. Not available in the Great Lakes, St. Lawrence Seaway, or the Puget Sound and the Strait of Juan de Fuca and its approaches.
2. Only for use in the Great Lakes, St Lawrence Seaway, and Puget Sound and the Strait of Juan de Fuca and its approaches.
6. Available for intership, ship, and coast general purpose calling by noncommercial ships.
7. Available only in the Puget Sound and the Strait of Juan de Fuca.

NOAA WEATHER RADIO BROADCASTS

City	Station	Frequency	Broadcast Times
Astoria, OR	KEC-91	162.40 MHz	continuous
Brookings, OR	KIH-37	162.55 MHz	continuous
Coos Bay, OR	KIH-32	162.40 MHz	continuous
Eugene, OR	KEC-42	162.40 MHz	continuous
Medford, OR	WXL-85	162.40 MHz	continuous
Neah Bay, WA	KIH-36	162.55 MHz	continuous
New Port, OR	KIH-33	162.55 MHz	continuous
Olympia, WA	WXM-62	162.475 MHz	continuous
Portland, OR	KIG-98	162.55 MHz	continuous
Roseburg, OR	WXL-98	162.55 MHz	continuous
Salem, OR	WXL-96	162.475 MHz	continuous
Seattle, WA	KHB-60	162.55 MHz	continuous
Victoria, BC	CFA-240	162.40 MHz	continuous

The above VHF-FM radio stations are managed by the National Weather Service. Broadcast tapes are generally updated every three hours during the day, and at least every six hours. Contents vary, but generally contain the following information:

1. Marine forecasts and warnings for coastal waters (out 60 miles), including the Strait of Juan de Fuca and the Inland Waters of Western Washington.

2. Offshore waters forecast (60-250 miles offshore) from Cape Flattery to Point Conception.

3. State forecasts and local forecasts.

4. Selected weather observations from Coast Guard, buoys, and other stations in Western Oregon, Western Washington, Northern California, and Southwestern British Columbia.

Whenever severe weather warnings are necessary, the tape will be updated and the transmission devoted to "up-to-the-minute" information on storm dangers. For more information concerning weather broadcasts contact the National Weather Service (NOAA), 7600 Sand Point Way NE, BIN C15700, Seattle, WA 98115 or call (206) 526-6095.

UNDERSTAND AND FOLLOW THESE PROCEDURES AT ALL TIMES

1. Channel 16 may ONLY be used for Distress and Calling. Keep all calls as short as possible.

2. Keep ALL calling to an absolute minimum on Channel 16.

3. It is illegal to use Channel 16 for radio checks. If requesting a radio check, use Channel 16 to hail the nearest Coast Guard Group. Once the Coast Guard Group acknowledges your hail, request Coast Guard Group to switch and answer Channel 22A. Once Coast Guard Group answers on Channel 22a, you may now request a radio check. The Coast Guard Group will respond accordingly.

4. Before transmitting, listen long enough to be sure there is not a distress in progress and to also ensure you will not interfere with another station making a call.

5. Do **NOT** call Marine Operators on Channel 16. Use their working channel.

6. Children should be instructed how to operate the radio in case of an emergency, but they also must be taught that it is NOT a toy, or a land telephone, or CB circuit (some adults need to be reminded of this also).

7. Be sure the channel you are using is appropriate for the type of communications. Each channel has a designation.

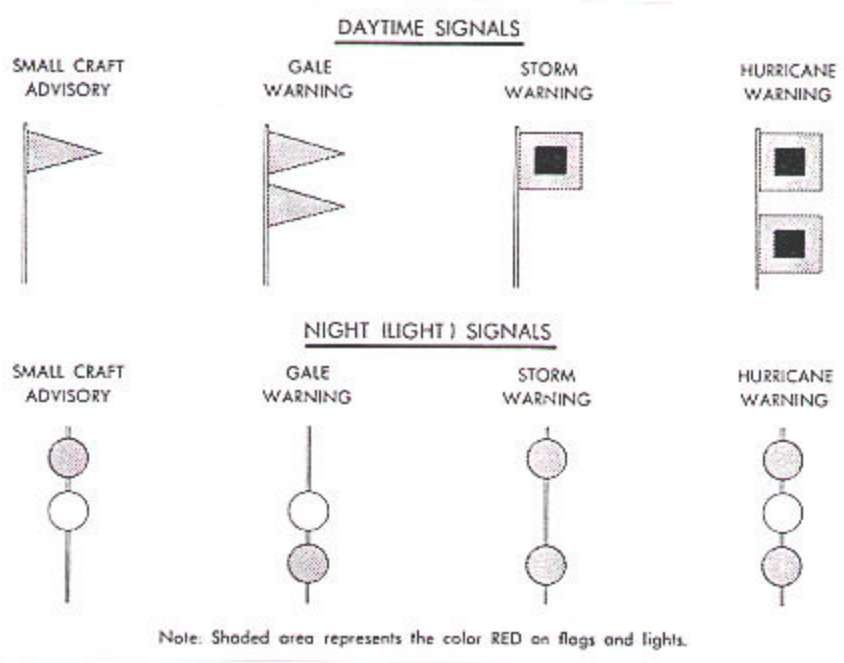
8. Use low power or one watt to avoid interference to other users (mandatory on Channels 13, 14, & 67).

9. **NO** unnecessary communications of any kind are permitted on VHF. General "chit-chat" is not permitted.

10. Use your FCC assigned call letters at the beginning and end of each transmission sequence.

11. Never use a Telephone Credit Card on your VHF to the Marine Operator. Other people can hear your number. Use only a Marine Telephone Identification Number (MIN).

12. Your VHF MUST be licensed. If you cruise outside U.S. waters you must have an operator's license.



EXPLANATION OF WEATHER DISPLAYS

1. Small Craft Advisory: One RED pennant displayed by day, a RED light ABOVE a WHITE light at night, to alert mariners to sustained (more than two hours) weather or sea conditions, either present or forecast, that might be hazardous to small boats. Mariners learning of a Small Craft Advisory are urged to determine immediately the reason by tuning their radios to the latest marine broadcasts. Decision as to the degree of hazard is left up to the boatman, based on his/her experience, and size and type of boat. The threshold conditions for the Small Craft Advisory are usually 18 knots of wind (less than 18 knots in some dangerous waters) or hazardous wave conditions.

2. Gale Warning: Two RED pennants displayed by day, a WHITE light ABOVE a RED light at night, to indicate that winds within the range 34 to 47 knots are forecast for the area.

3. Storm Warning: A single square RED flag with a BLACK center displayed during daytime, two RED lights at night, to indicate winds 48 knots and above, no matter how high the speed, are forecast for the area. However, if the winds are associated with a tropical cyclone (hurricane) the STORM WARNING display indicates that winds 64 knots and above are forecast for the area.

NOTE: A "HURRICANE WATCH" is an announcement issued by the National Weather Service via press and radio and television broadcasts whenever a tropical storm or hurricane becomes a threat to a coastal area. The "Hurricane Watch" announcement is not a warning, rather it indicates that the hurricane is near enough that everyone in the area covered by the "Watch" should listen to their radios for subsequent advisories and be ready take precautionary action in case hurricane warnings are issued.

NOTE: As of February 1989 the National Weather Service discontinued its operation of the above visual system. Some local organizations, however, continued this program using information from a NOAA Weather Radio or some similar source for activating or ending their display. A SPECIAL MARINE WARNING BULLETIN is issued whenever a severe local storm or strong wind of brief duration is imminent and is not covered by existing warnings or advisories. Boaters will be able to receive these special warnings by keeping tuned to a NOAA VHF-FM radio station or to Coast Guard and commercial radio stations that transmit marine weather information.

OREGON AND WASHINGTON - COASTAL WARNING DISPLAYS

The U.S. Coast Guard continues to maintain certain displays. The Coastal Warning Displays that remain in service are located as follows:

1. SEATTLE - SUPERVISING STATION

Station	Latitude	Longitude	Type of Display
Neah Bay Station, WA	48°22.3'N	124°35.8'W	D & N
Quillayute River, WA	47°54.4'N	124°38.0'W	D
Westport, WA	46°54.3'N	124°07.2'W	D

2. ASTORIA - SUPERVISING STATION

Station	Latitude	Longitude	Type of Display
Cape Disappointment	46°16.7'N	124°02.8'W	D
Tillamook Bay Station, OR	45°33.2'N	123°54.8'W	D

3. SALEM - SUPERVISING STATION

Station	Latitude	Longitude	Type of Display
Depoe Bay Station, OR	44°48.6'N	124°03.5'W	D
Yaquina Bay Station, OR	44°37.6'N	124°03.3'W	D

4. EUGENE - SUPERVISING STATION

Station	Latitude	Longitude	Type of Display
Siuslaw River Station, OR	44°00.1'N	124°07.3'W	D
Umpqua River-Winchester Bay, OR	43°40.8'N	124°10.6'W	D
Umpqua River Lookout, OR	43°40.0'N	124°12.2'W	D
Coos Head Lookout, OR	43°21.1'N	124°20.1'W	D
Coos Bay Station, OR	43°20.4'N.	124°19.4'W.	D
*Coquille River Patrol, OR	43°07.2'N.	124°25.0'W.	D

5. MEDFORD - SUPERVISING STATION

Station	Latitude	Longitude	Type of Display
*Rogue River Patrol, OR	42°25.6'N.	124°25.3'W.	D
Chetco River Station, OR	42°02.7'N.	124°16.1'W.	D

LEGEND: * - Seasonal Displays Only
D - Daytime
N - Nighttime

CHAPTER V

BOATING SAFETY

NOTE: This chapter deals with boating safety. Many articles in this chapter have corresponding rules and regulations. Summaries of these rules and regulations are contained in CHAPTER IX of this Special Notice to Mariners. More information about recreational boating safety can be obtained by visiting the Coast Guard Boating Safety web site at www.uscgboating.org. Most of the material in this section is taken from, "Federal Requirements and Safety Tips for Recreational Boats," which is produced by the United States Coast Guard Office of Boating Safety.

As the operator and/or owner of a vessel you are responsible not only for the prudent and safe operation of your boat, but also for the lives and safety of your passengers and others around you. Become familiar with Federal, State, and local rules and regulations regarding safe boat operation and try to learn all aspects of good seamanship such as boat handling, navigation and piloting, weather, communications, etc. If you don't feel comfortable with your knowledge in some of these areas, or if you want to brush up on your skills, you may wish to take a safe boating course offered by either the USCG Auxiliary or the United States Power Squadrons. These organizations are comprised of volunteers dedicated to boating safety. Both organizations offer a variety of outstanding safe boating courses at minimal or no cost. For more information on classes available in your area, check the Boat/US Course line at (800) 336 BOAT (2628).

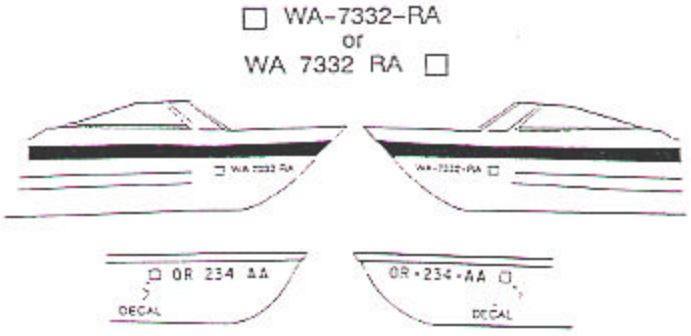
Registration, Numbering and Documentation

All undocumented vessels equipped with propulsion machinery must be registered in the state of principal use. A certificate of number will be issued upon registering the vessel. These numbers must be displayed on your vessel. The owner/operator of a vessel must carry a valid certificate of number whenever the vessel is in use. When moved to a new state of principal use, the certificate is valid for 60 days. Check with your state boating authority for numbering requirements. Some states require all vessels to be numbered.

Some larger recreational vessels may be documented. The certificate of documentation **MUST** be on board a documented vessel at all times. A document serves as a certificate of nationality and an authorization for a specific trade. A documented vessel is not exempt from applicable state or federal taxes, nor is its operator exempt from compliance with federal or state equipment carriage requirements.

Display of Numbers

Numbers must be painted or permanently attached to each side of the forward half of the vessel. The validation stickers must be affixed within six inches of the registration number. With the exception of the vessel fee decal, no other letters or numbers may be displayed nearby.



Lettering must be in plain, vertical block characters of not less than 3 inches in height. Spaces or hyphens between letter and number groupings must be equal to the width of a letter other than "I" or a number other than "1".

Notification of Changes to a Numbered Vessel

The owner of a vessel must notify the agency which issued the certificate of number within 15 days if:

1. The vessel is transferred, destroyed, abandoned, lost, stolen or recovered.

2. The certificate of number is lost, destroyed or the owner's address changes.

If the certificate of number becomes invalid for any reason, it must be surrendered in the manner prescribed to the issuing authority within 15 days.

The following are the state offices within the Thirteenth District that regulate boating laws and registration.

Idaho
Department of Parks and Recreation
Boating Program
P.O. Box 83720
Boise, ID 83720-0065
(208) 334-4180

Montana
Montana Fish, Wildlife, and Parks
Division of Law Enforcement
1420 East 6th Avenue
Helena, MT 59620
(406) 444-2452

Oregon
Oregon State Marine Board
435 Commercial St. NE #400
Salem, OR 97310
(503) 373-1405

Washington
WA State Parks & Recreation
Boating Programs
7150 Cleanwater Lane
PO Box 42654
Olympia, WA 98504-2654
(360) 902-8525

A documented vessel must have the name of the vessel and hailing port plainly marked on the exterior part of the hull in clearly legible letters not less than 4 inches in height. In addition, the documented vessel must have the "Official Number" permanently affixed in block type, Arabic numerals, not less than 3 inches in height on some clearly visible interior structural part of the boat.

VESSEL DOCUMENTATION WITH THE COAST GUARD

With a few exceptions, all commercial vessels of 5 or more net tons which are used on the navigable waters of the U.S. must be documented. A commercial vessel of 5 or more net tons engaged in foreign trade is eligible, but not required, to be documented. A recreational boat may (at the option of the owner) also be documented if it is 5 or more net tons. The Certificate of Documentation is issued by the Coast Guard. There are advantages and disadvantages to documenting your vessel. The main benefit of documentation versus numbering, is that a documented vessel may be the subject of a Preferred Ship Mortgage under the Ship Mortgage Act of 1920. In practical terms, this means that lending institutions regard a documented vessel as a more secure form of collateral. For larger and more expensive boats, it may be easier to obtain bank financing if the boat is documented rather than numbered. Another benefit is that the certificate of documentation may make customs entry and clearance easier in foreign ports. The document is treated as a form of national registration that clearly identifies the nationality of the vessel. The main disadvantage of documenting rather than numbering is the higher cost. The initial documentation fee is currently $100.00. The numbering fee varies from State to State but averages about $25.00. In addition, documented vessels are not exempt from State or local taxes, or other boating fees. For complete information on documenting a vessel contact the U. S. Coast Guard Vessel Documentation Office at (800) 799-8362.

OPERATOR'S RESPONSIBILITIES

Your water fun depends on you, your equipment and other people who, like yourself, enjoy spending leisure time on, in or near the water. Let's take a look at your responsibilities:

1. File a float plan with a relative or friend.
2. Make sure the boat is in top operating condition and that there are no tripping hazards. The boat should be free of fire hazards and have clean bilges.
3. Safety equipment, required by law, is on board, maintained in good condition, and you know how to properly use these devices.
4. Have a complete knowledge of the operation and handling characteristics of your boat.
5. Know your position and know where you are going.
6. Maintain a safe speed at all times to avoid collision.
7. Keep an eye out for changing weather conditions, and act accordingly.
8. Know and practice the Rules of the Road (Navigational Rules).
9. Know and obey Federal and state regulations and waterway markers.
10. Maintain a clear, unobstructed view forward at all times. "Scan" the water back and forth; avoid "tunnel" vision. Most boating collisions are caused by inattention. *You are the key to water safety!*

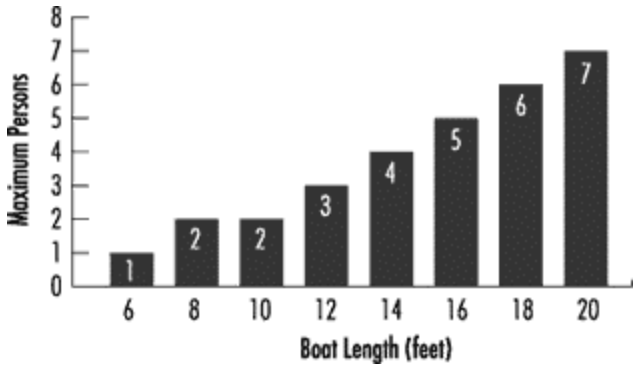
CHOOSING THE RIGHT BOAT

In the U.S. there are more than 2,500 boat manufacturers that produce more than 4,000 different boat models which are powered by a variety of outboard, stern drive, and inboard engines. Because of the great variety, choosing the right boat can be confusing, but the right choice is an important step in enjoying the nations waterways. In selecting the right boat for your needs, consider the type of activity for which you plan to use it, such as water skiing, fishing, cruising, or weekend outings. You need to consider the type of water on which it will be used, such as lakes, rivers, open ocean, or the Great Lakes. The boat should be large enough to handle the number of people on a normal outing.

LOADING YOUR BOAT

Never overload your boat with passengers and cargo beyond its safe carrying capacity. Too many people and/or gear will cause the boat to become unstable. Always balance the load so that the boat maintains proper trim. Here are some things to remember when loading your boat:

1. Distribute the load evenly fore and aft and from side to side.
2. Keep the load low.
3. Keep passengers seated (Do not stand up in a small boat!).
4. Fasten gear to prevent shifting.
5. Do not exceed the "U.S. Coast Guard Maximum Capacities" information label (commonly called the Capacity Plate).
6. If there is no capacity plate, use the following chart as a guide to determine the maximum number of persons you can safely carry in calm weather. The chart is applicable only to mono-hull boats less than 20ft in length. A mono-hull is a boat, which makes a single "footprint" in the water when loaded to its rated capacity. For example, a catamaran, trimaran, or a pontoon boat is not a mono-hull boat.



Many hunters and anglers do not think of themselves as boaters, but use small semi-v hull vessels, flatbottom jon-boats or canoes to pursue their sports. These boats tend to be unstable and easily capsize. Capsizings, sinkings, and falls overboard from small boats account for 70% of boating fatalities and these facts mean you must have a greater awareness of the boat's limitations and the skill and knowledge to overcome them.

Standing in a small boat raises the center of gravity, often to the point of capsizing. Standing for any reason or even changing position in a small boat can be dangerous, as is sitting on the gunwales or seat backs or on a pedestal seat while underway. A wave or sudden turn may cause a fall overboard or capsizing because of the raised center of gravity.

ANCHORING

Anchoring is done for two principal reasons: first, to stop for fishing, swimming, lunch, or an overnight stay and secondly, to keep you from running aground in bad weather or as a result of engine failure. Anchoring can be a simple task if you follow these guidelines:

1. Make sure y ou have the proper type of anchor (danforth/plow/mushroom).

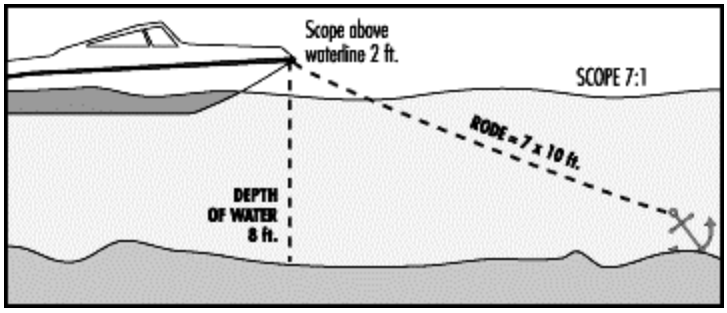
2. A three to six foot length of galvanized chain should be attached to the anchor. The chain will stand up to the abrasion of sand, rock or mud on the bottom much better than a fiber line.

3. A suitable length of nylon anchor line should be attached to the end of the chain (this combination is called the "Rode"). The nylon will stretch under heavy strain cushioning the impact of the waves or wind on the boat and the anchor.

4. Select an area that offers maximum shelter from wind, current and boat traffic.

5. Determine depth of water and type of bottom (preferably sand or mud).

6. Calculate the amount of anchor line you will need. General rule: 5 to 7 times as much anchor line as the depth of water plus the distance from the water to where the anchor will attach to the bow. For example, if the water depth is 8 feet and it is 2 feet from the top of water to your bow cleat, you would multiply 10 feet by 5 to 7 to get the amount of anchor line to put out (See diagram on following page).



7. Secure the anchor line to the bow cleat at the point you want it to stop.

8. Bring the bow of the vessel into the wind or current.

9. When you get to the spot you want to anchor, place the engine in neutral.

10. When the boat comes to a stop, slowly lower the anchor. Do not throw the anchor over, as it will tend to entangle the anchor.

11. When all anchor line has been let out, back down on the anchor with engine in idle reverse to help set the anchor.

12. When anchor is firmly set, use reference points (landmarks) in relation to the boat to make sure you are not drifting. Check these points frequently.

Do not anchor by the Stern!! Anchoring a small boat by the stern has caused many to capsize and sink. The transom is usually squared off and has less freeboard than the bow. In a current, the force of the water can pull the stern under. The boat is also vulnerable to swamping by wave action. The weight of a motor, fuel tank, or other gear in the stern increases the risk.

FUELING

Most fires and explosions happen during or after fueling. To prevent an accident, follow these rules:

1. Portable tanks should be refueled ashore.
2. Close all hatches and other openings before fueling.
3. Extinguish all smoking materials.
4. Turn off engines, all electrical equipment, radios, stoves and other appliances.
5. Remove all passengers.
6. Keep the fill nozzle in contact with the tank and wipe up any spilled fuel.
7. Open all ports, hatches and doors to ventilate.
8. Run the blower for at least four minutes.
9. Check the bilges for fuel vapors before starting the engine.
10. Do the "sniff test". Sniff around to make sure there is no odor of gasoline anywhere in the boat. *Do not start the engine until all traces of fuel vapors are eliminated!!*

Fuel Management

Practice the "One-Third Rule" by using:

1. One-third of the fuel going out
2. One-third to get back and
3. One-third in reserve

FLOAT PLAN

Play it safe, keep a stack a float plan forms on hand. Leave a copy with a friend, relative or local marina before heading out on the water. In case of an emergency, pertinent information will be right at their fingertips to enable them to contact the local marine police or Coast Guard with necessary details. A word of caution-in case you're delayed, and it's not an emergency, inform those with your float plan, and be sure to notify them when you return so the float plan can be "closed out" and an unnecessary and costly search avoided.

FLOAT PLAN

1. Name and phone number of operator and person reporting:
   Operator:_____ Reporting person:_____
2. Boat description:
   Type:_____ Color:_____ Trim:_____
   Registration Number:_____ Name:_____ Make:_____
   Length:_____ Other pertinent information:_____
3. Persons aboard:

Name:	Age:	Address and Telephone No.
a. _____	_____	_____
b. _____	_____	_____
c. _____	_____	_____
d. _____	_____	_____
e. _____	_____	_____
f. _____	_____	_____

4. Do any of the persons aboard have a medical problem? YES / NO
   If so, what?_____
5. Propulsion:
   Type:_____ HP:_____ Number:_____ Fuel Capacity:_____ Fuel Type:_____
6. Survival Equipment: (check as appropriate)
   PFDs_____ Flares_____ Mirror_____ Smoke signals_____ Flashlight_____ Food_____ Water_____
   Paddles_____ Anchor_____ Raft or dinghy_____ EPIRB_____ Other_____
7. Radio: yes/no
   Type:_____ Frequencies:_____
8. Cellular Phone: yes/no Cell Phone Number :_____
9. Trip Plan:

Depart From: _____
Departure Date: _____ Departure Time: _____
Destination: _____
Arrival Date: _____Arrival Time: _____
If vessels has not arrived /returned by: Date: _____ Time: _____
Call the Coast Guard or local authority at the following number(s):
_____

10. Remarks:

_____
_____
_____

PROPELLER BLADES WARNING

Never forget the danger that boat propellers can inflict to persons in the water. Statistics indicate the most propeller injuries and fatalities involve open motorboats 16 to less than 26 feet in length and are due to operator inattention, inexperience, and carelessness. Remember to shut off your engines when approaching swimmers. When engines are running, alert swimmers to stay clear of the stern. Propeller guards are not suitable for all types of boats. Therefore, the best and safest course of action to take when people are in water near your boat--Shut off your engines!

People in the water can be severely injured!

WEATHER

You should never leave the dock without first checking the local weather forecast. You can get the weather information from the TV, radio, local, newspaper, on-line, or from one of the weather channels on your VHF radio.

At certain times of the year weather can change rapidly and you should continually keep a "weather eye" out. While you are out in a boat here are a few signs you can look for that indicate an approaching weather change:

1. Weather changes generally come from the west. Scan the sky with your weather eye, especially to the west.
2. Watch for cloud to build up, especially rapid vertically rising clouds.
3. Sudden drop in temperature.
4. Sudden change in wind direction and/or speed.

5. If you have a barometer on your boat, check it every 2 to 3 hours. A rising barometer indicates fair weather and rise in wind velocity; a falling barometer indicates stormy or rainy weather.

What To Do in Severe Weather

1. Reduce speed, but keep just enough power to maintain headway.
2. Put on your PFDs.
3. Turn on running lights.
4. Head for nearest shore that is safe to approach, if possible.
5. Head bow of boat into the waves at about a 45-degree angle.
6. Keep bilges free of water.
7. Seat passengers on bottom of boat near centerline.
8. If your engine fails, trail a sea anchor on a line from the bow to keep the boat headed into the waves. A bucket will work as a sea anchor in an emergency.
9. Anchor the boat if necessary.

STAYING AFLOAT

It is common belief that someone dressed in heavy clothing or waders will sink immediately if they fall overboard. This is not true. Air trapped in clothing provides considerable flotation, and bending the knees will trap air in waders, providing additional flotation. To stay afloat follow these rules:

1. Remain calm, do not thrash about or try to remove clothing or footwear. This leads to exhaustion and increases the loss of air that keeps you afloat.
2. Keep your PFD on.
3. Keep your knees bent.
4. Float on your back and paddle slowly to safety.

Cold Water Survival

Sudden immersion in cold water can induce rapid, uncontrolled breathing, cardiac arrest, and other physical body conditions which can result in drowning. Always wearing a PFD will help you survive in rapid immersion situations. In other situations where you must enter the water, here are few things to follow:

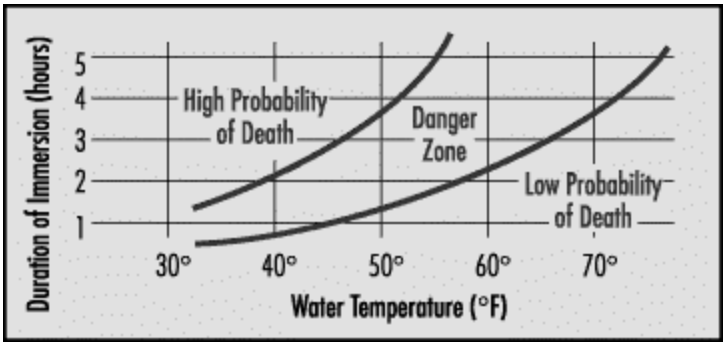
H.E.L.P. Position

- Wear a PFD
- Button up your clothing
- Cover your head if possible and enter the water slowly
- Keep your head out of the water if at all possible
- Assume the H.E.L.P. position

HYPOTHERMIA

Immersion in water speeds the loss of body heat and can lead to hypothermia. Hypothermia is the abnormal lowering of internal body temperature. If your boat capsizes it will likely float on or just below the surface. Outboard powered vessels built after 1978 are designed to support you even if full of water or capsized. To reduce the effects of hypothermia get in or on the boat. Try to get as much of your body out of the water as possible. If you can't get in the boat a PFD will enable you to keep your head out of the water. This is very important because about 50% of body heat loss is from the head.

It may be possible to revive a drowning victim who has been under water for considerable time and shows no signs of life. Numerous documented cases exist where victims have been resuscitated with no apparent harmful effects after long immersions. Start CPR immediately and get the victim to a hospital as quickly as possible.



The Danger Zone indicates where safety precautions and appropriate behavior (adopting H.E.L.P) can increase your chances of survival when immersed in cold water.

EQUIPMENT REQUIREMENTS

Coast Guard Approved Equipment

"Coast Guard Approved Equipment" has been approved by the Commandant of the U.S. Coast Guard and has been determined to be in compliance with U.S. Coast Guard specifications and regulations relating to materials, construction, and performance. The "Equipment List" is published by the Coast Guard and contains a long listing of items approved, certified, or accepted under Marine Inspection and Navigation Laws. The latest printing was May 15, 1994. However, a current electronic edition is available for searches at www.uscg.mil/hq/g-m/mse/equiplistexpl.htm. Individuals may download specific sections from that site. The 1994 version is available for sale as follows:

U. S. Government Printing Office Superintendent of Documents Attn: New Orders P. O. Box 371954 Pittsburgh, PA 15250-7954	Phone: (202) 512-1800 Fax: (202) 512-2233 http://www.access.gpo.gov/su_docs/sale.html Refer to ordering number: ISBN 0-16-045408-5

PERSONAL FLOTATION DEVICES (PFDs)

Personal flotation devices are the most important pieces of safety equipment that all boaters must have on board their vessels. All recreational boats must carry one wearable PFD (Type I, II, III or V PFD) for each person aboard. A Type V PFD provides performance of either a Type I, II, or III PFD (as marked on its label) and must be used according to the label requirements. Any boat 16ft and longer (except canoes and kayaks) must also carry one throwable PFD (Type IV PFD).

PFDs must be:

1. Coast Guard approved,
2. in good and serviceable condition, and
3. the appropriate size for the intended user.

Accessibility:

1. Wearable PFDs must be readily accessible.
2. You must be able to put them on in a reasonable amount of time in an emergency (vessel sinking, on fire, etc.).
3. They should not be stowed in plastic bags, in locked or closed compartments or have other gear stowed on top of them.
4. The best PFD is the one you will wear.
5. Though not required, a PFD should be worn at all times when the vessel is underway. A wearable PFD may save your life, but only if you wear it.
6. Throwable devices must be immediately available for use.

Many states *require* the wearing of life jackets for certain age groups (e.g. children), or when engaged in certain types of activities such as water skiing, operating personal watercraft, white water boating activities, or sailboarding. Check with your state boating safety officials.

PFD Flotation

There are three basic kinds of PFD flotation in the five *types* of PFDs with the following characteristics:

1. Inherently Buoyant (primarily Foam):

   a. The *most* reliable
   b. Adult, Youth, Child, and Infant sizes
   c. For swimmers & non-swimmers
   d. Wearable & throwable styles

MINIMUM BUOYANY

Wearable Size	Type	Inherent Buoyancy (Foam)
Adult	I	22 lb.
	II & III	15.5 lb.
	V	15.5 to 22 lb.
Youth	II & III	11 lb.
	V	11 to 15.5 lb.
Child and Infant	II	7 lb.
Throwable:		
Cushion	IV	20 lb.
Ring Buoy	IV	16.5 and 32 lb.

2. Inflatable

   a. The most compact and may be more comfortable to wear
   b. Some with the best in-water performance
   c. Inflatable PFDs require the user to pay careful attention to the condition of the device.
   d. Inflatable PFDs must have a full cylinder and all status indicators on the inflator must be green, or the device is NOT serviceable, and does NOT satisfy the requirement to carry PFDs.
   e. Coast Guard Approved Inflatable PFDs are authorized only on recreational boats by a person at least 16 years of age.
   f. Sizes only for adults
   g. Only recommended for swimmers
   h. Wearable styles only

MINIMUM BUOYANCY

Wearable Size	Type	Inflatable Buoyancy
Adult	I & II	34 lb.
	III	22.5 lb.
	V	22.5 to 34 lb.

3. Hybrid (Foam & Inflation)

   a. Reliable
   b. Adult, Youth, and Child sizes
   c. For swimmers & non-swimmers
   d. Wearable styles only
   e. Some designed for water sports

HYBRID BUOYANCY CHART

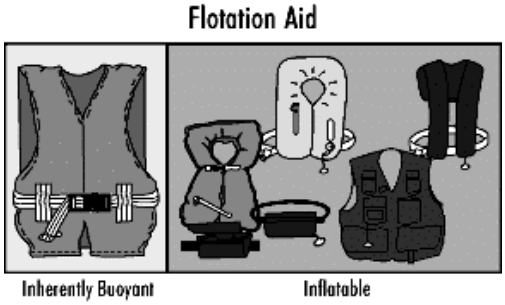
Wearable Size	Type	Inherent Buoyancy	Inflated Total Buoyancy
Adult	II & III V	10 lb. 7.5 lb.	22 lb. 22 lb.
Youth	II & III V	9 lb. 7.5 lb.	15 lb. 15 lb.
Child	II	7 lb.	12 lb.

TYPES OF PFDS

A TYPE I PFD, or OFF-SHORE LIFE JACKET provides the most buoy ancy. It is effective for all waters, especially open, rough or remote waters where rescue may be delayed. It is designed to turn most unconscious wearers in the water to a face-up position.

A TYPE II PFD, or NEAR-SHORE BUOYANCY VEST is intended for calm, inland water or where there is a good chance of quick rescue. Inherent buoyant PFDs of this type will turn *some* unconscious wearers to a face-up position in the water, but the turning is not as pronounced as a Type I. This type of inflatable turns as well as a Type I foam PFD.

A TYPE III PFD, or FLOTATION AID is good for conscious users in calm, inland water, or where there is a good chance of quick rescue. It is designed so wearers can place themselves in a face-up position in the water. The wearer may have to tilt their head back to avoid turning face-down in the water. The Type III foam vest has the same minimum buoyancy as a Type II PFD. It comes in many styles, colors, and sizes and is generally the most comfortable type for continuous wear. Float coats, fishing vests, and vests designed with features suitable for various sports activities are examples of this type PFD. This type inflatable turns as well as a Type II foam PFD.

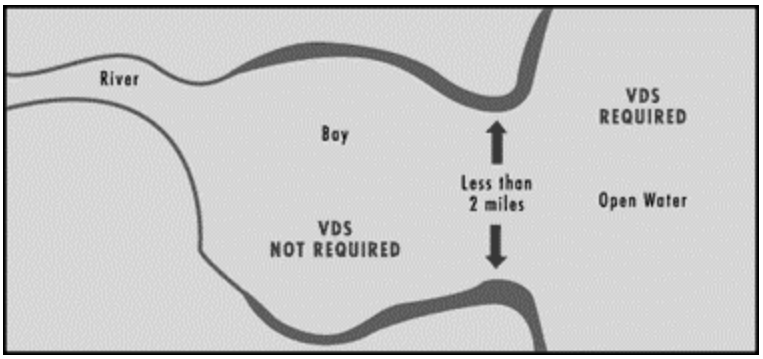


A TYPE IV PFD, or THROWABLE DEVICE is intended for calm, inland water with heavy boat traffic, where help is always present. It is designed to be thrown to a person in the water and grasped and held by the user until rescued -- It is *not* designed to be worn. Type IV devices include buoyant cushions, ring buoys, and horseshoe buoys. There are no inflatable Type IV devices.

A TYPE V PFD, or SPECIAL USE DEVICE is intended for specific activities and may be carried instead of another PFD only if used according to the approval condition(s) on its label. A Type V PFD provides performance of either a Type I, II, or III PFD (as marked on its label). If the label says the PFD is "approved only when worn" the PFD must be worn, except for persons in enclosed spaces and used in accordance with the approval label, to meet carriage requirements. Some Type V devices provide significant hypothermia protection. Varieties include deck suits, work vests, and board sailing vests.

VISUAL DISTRESS SIGNALS (VDS)

All recreational boats, when used on coastal waters, the Great Lakes, territorial seas, and those waters connected directly to the Great Lakes and the territorial seas, up to a point where a body of water is less than two miles wide, must be equipped with Coast Guard Approved VDSs (see Chapter I for more information). Recreational boats under 16 feet in length, open sailboats not equipped with propulsion machinery and less than 26 feet in length, and manually propelled boats are exempt from daytime signals but must carry night signals when used at night. All other recreational boats must carry both night and day signaling devices. If pyrotechnic devices are selected, a minimum of three day and three night signals are required. If no pyrotechnic signals are carried only one day signal and one night signal is required.



Pyrotechnic Devices

1. Pyrotechnic Visual Distress Signals must be Coast Guard Approved, in serviceable condition, and readily accessible.

    a. They are marked with an expiration date. Expired signals may be carried as extra equipment, but can not be counted toward meeting the visual distress signal requirement, since they may be unreliable.
    b. Launchers manufactured before January 1, 1981, intended for use with approved signals, are not required to be Coast Guard Approved.
    c. If pyrotechnic devices are selected a minimum of three are required. That is, three signals for day use and three signals for night. Some pyrotechnic signals meet both day and night use requirements.
    d. Pyrotechnic devices should be stored in a cool, dry location, if possible.
    e. A watertight container painted red or orange and prominently marked "DISTRESS SIGNALS" or "FLARES" is recommended.

2. U. S. Coast Guard Approved Pyrotechnic Visual Distress Signals and associated devices include:

    a. Pyrotechnic red flares, hand-held or aerial.
    b. Pyrotechnic orange smoke, hand-held or floating.
    c. Launchers for aerial red meteors or parachute flares.

[Each of these devices has a different operating (burning) time. Check the label to see how long each pyrotechnic device will actually be illuminated. This will allow you to select a warning device better suited to the conditions where your boat will operate.]

Non-Pyrotechnic Devices

Non-Pyrotechnic Visual Distress Signals must be in serviceable condition, readily accessible, and certified by the manufacturer as complying with U.S.C.G. requirements. They include:

1. **Orange distress flag**

    a. Day signal only.
    b. Must be at least 3 x 3 feet with a black square and ball on an orange background.
    c. Must be marked with an indication that it meets Coast Guard requirements in 46 CFR 160.072.
    d. Most distinctive when attached and waved on a paddle, boathook, or flown from a mast.
    e. May also be incorporated as part of devices designed to attract attention in an emergency, such as balloons, kites, or floating streamers.

2. **Electric distress light**

   a. Accepted for night use only
   b. Automatically flashes the international SOS distress signal (... --- ...)
   c. Must be marked with an indication that it meets Coast Guard requirements in 46 CFR 161.013.

Regulations prohibit display of visual distress signals on the water under any circumstances except when assistance is required to prevent immediate or potential danger to persons on board a vessel.

All distress signals have distinct advantages and disadvantages. No single device is ideal under all conditions or suitable for all purposes. Pyrotechnics are universally recognized as excellent distress signals. However, there is potential for injury and property damage if not properly handled. These devices produce a very hot flame and the residue can cause burns and ignite flammable materials.

Pistol launched and hand-held parachute flares and meteors have many characteristics of a firearm and must be handled with caution. **In some states they are considered a firearm and prohibited from use.**

The following are just a few of the variety and combination of devices which can be carried in order to meet the requirements:

1. Three hand-held red flares (day and night).
2. One hand-held red flare and two parachute flares (day and night).
3. One hand-held orange smoke signal, two floating orange smoke signals (day) and one electric distress light (night only).

All boaters should be able to signal for help. Boaters must have current dated U.S.C.G. Approved day and night signals for all boats operating on coastal and open bodies of water.

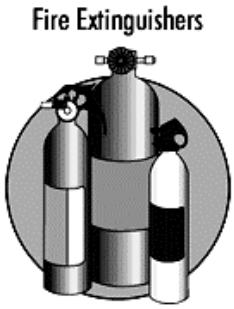
FLARE DISPOSAL

The Thirteenth Coast Guard District has partnered with ORION Marine Products to sponsor a flare disposal program in the coastal regions of Oregon and Washington. Coast Guard shore stations will accept out-dated marine flares from recreational boaters (no commercial materials will be accepted), for proper disposal, or for public education and training. Boaters may also give the material to Coast Guard Auxiliarists during advertised "Flare Turn In Days", which are often held at local marinas or other locations during the boating season. In return for turning in the outdated flares, boaters will receive a coupon for 10% off the purchase of new ORION flares. In the past, boaters have occasionally "disposed" of their expired flares by shooting them off in situations of non-distress, **which is illegal**. So please, **RETIRE THEM, DON'T FIRE THEM!**

FIRE EXTINGUISHERS

Fire on a boat is one of a skipper's greatest fears and one of the major causes of damage to boats. For protection, all boats *should* carry readily accessible approved fire extinguishers. Coast Guard Approved fire extinguishers are ***required*** on boats where a fire hazard could be expected from the motors or the fuel system. Extinguishers are classified by a letter and number symbol. The letter indicates the type of fire the unit is designed to extinguish (Type B, for example, are designed to extinguish flammable liquids such as gasoline, oil and grease fires). The number indicates the relative size of the extinguisher. The higher the number, the larger the extinguisher.

Coast Guard Approved extinguishers required for boats are hand portable, either B-I or B-II classification and have a specific marine type mounting bracket. The special bracket is required to securely hold the extinguisher in a moving boat. It is recommended the extinguishers be mounted in a readily accessible position, away from the areas where a fire could likely start such as the galley or the engine compartment.



Extinguisher markings can be confusing because extinguishers can be approved for several different types of hazards. For instance, an extinguisher marked "Type A, Size II, Type B:C, Size I" is a B-I extinguisher.

Look for the part of the label that says "Marine Type USCG".

- Make sure Type B is indicated

Portable extinguishers will be either size I or II. Size III and larger are too big for use on most recreational boats.

Class	Foam (Gals)	CO_2 (lbs)	Dry Chemical (lbs)	Halon (lbs)
B-I (Type B, Size I)	1.25	4	2	2.5
B-II (Type B, Size II)	2.5	15	10	10

Fire extinguishers are required on boats if any of the following conditions exist:

1. Inboard engines are installed.
2. There are closed compartments and compartments under seats where portable fuel tanks may be stored.
3. There are double bottoms not sealed to the hull or which are not completely filled with flotation materials.
4. There are closed living spaces.
5. There are closed stowage compartments in which combustible or flammable materials are stored.
6. There are permanently installed fuel tanks. (Fuel tanks secured so they cannot be moved in case of fire or other emergencies are considered permanently installed. There are no gallon capacity limits to determine if a fuel tank is portable. If the weight of a fuel tank is such that persons on board cannot move it, the Coast Guard considers it permanently installed.)

Fire Extinguisher Maintenance
Inspect extinguishers monthly to make sure that:

1. Seals and tamper indicators are not broken or missing.
2. Pressure gauges or indicators read in the operable range. (**NOTE**: CO_2 extinguishers do not have gauges.)
3. There is no obvious physical damage, corrosion, leakage or clogged nozzles.
4. Weigh extinguishers annually to assure that the minimum weight is as stated on the extinguisher label.

Fire extinguishers that do not satisfy the above requirements or that have been partially emptied must be replaced or taken to a qualified fire extinguisher servicing company for recharge.

Required Number of Fire Extinguishers
The number of fire extinguishers required on a recreational boat are based on the overall length of the boat. The following chart lists the number of extinguishers that are required. In the case where a Coast Guard Approved pre-engineered fire extinguishing system is installed for the protection of the engine compartment, the required number of units may be reduced in accordance with the chart.

Minimum number of hand portable fire extinguishers required:		
Vessel Length	**No Fixed System**	**With Approved Fixed Systems**
Less than 26'	1 B-1	0
26' to less than 40'	2 B-1 or 1 B-II	1 B-I
40' to 65'	3 B-I or 1 B-II and 1 B-I	2 B-1 or 1 B-II

Approved extinguishers must be inspected and tagged by a recognized fire extinguisher servicing company within 1 year of the examination, to be credited as one of the required fire extinguishers. The pressure gauge alone is not an accurate indicator that Halon extinguishers are full. The weight of the units should be checked regularly. It is recommended that portable extinguishers be mounted in a readily accessible position.

BACKFIRE FLAME ARRESTORS (BFA)

Gasoline engines installed in a vessel after April 25, 1940, except outboard motors, must be equipped with an acceptable means of backfire flame control. The device must be suitably attached to the air intake with a flame tight connection and is required to be Coast Guard approved or comply with SAE J-1928 or UL 1111 standards and marked accordingly.

SOUND PRODUCING DEVICES

The navigation rules require sound signals to be made under certain circumstances. Meeting, crossing and overtaking situations described in the Navigation Rules section are examples of when sound signals are required. Recreational vessels are also required to sound signals during periods of reduced visibility.

Vessels 39.4 feet/12 meters or more in length are required to carry on board a whistle or horn, and a bell. Any vessel less than 39.4 feet/12 meters in length may carry a whistle or horn, or some other means to make an efficient sound signal to signal your intentions and to signal your position in periods of reduced visibility.

Therefore, any vessel less than 39.4 feet/12 meters in length is required to make an efficient sound signal to signal intentions and to signal your position in periods of reduced visibility.

Vessel Operators are required to carry some type of horn or whistle capable of a 4 second blast audible for 1/2 mile for all boats. (Athletic whistles are not acceptable on boats over 39.4 feet/12 meters.)

MARINE SANITATION DEVICES (MSD)

All recreational boats with installed toilet facilities must have an operable marine sanitation device (MSD) on board. Vessels 65 feet and under may use a Type I, II or III MSD. Vessels over 65 feet must install a Type II or III MSD. All installed MSDs must be Coast Guard certified. Coast Guard certified devices are so labeled, except for some holding tanks, which are certified by definition under the regulations.

When operating a vessel on a body of water where the discharge of treated or untreated sewage is prohibited the operator must secure the device in a manner which prevents any discharge. Some acceptable methods are: padlocking overboard discharge valves in the closed position, using non releasable wire tie to hold overboard discharge valves in the closed position, closing overboard discharge values and removing the handle, locking the door, with padlock or key lock, to the space enclosing the toilets (for Type I and Type II only.)

Two types of MSDs treat the sewage, those being Type I and Type II chemical flow-through devices. Type III MSDs are holding tanks which are designed to prevent the overboard discharge of treated or untreated sewage.

The Coast Guard does not have specific capacity standards for all vessels. When you are selecting equipment, be sure to choose a system with adequate capacity for your needs. Look at the maximum number of persons that will be on board, including guests, and select accordingly. When choosing retention or recirculating devices, be sure to provide sufficient capacity between pumpouts for your cruising needs. Remember, a little planning before you invest in a MSD can result in years of trouble-free, safe operation, and you can take pride in your contribution to protecting the quality of the Nation's waters for future generations.

EMERGENCY POSITION INDICATING RADIOBEACON (EPIRBs)

For vessels that operate offshore an Emergency Position Indicating Radio Beacon (EPIRB) is a very useful piece of survival gear that has saved many lives in the Pacific in recent years. An EPIRB emits a radio signal that can be used by aircraft and vessels to locate mariners in distress.

Satellite EPIRBs, operate as part of a worldwide distress system. An international satellite constellation maintains a vigilant, global "listening" watch for satellite EPIRB distress signals. The National Oceanic and Atmospheric Administration (NOAA) operates satellites, ground stations, and an alert distribution system serving the U.S. and a wide segment of the international community.

When activated, the satellite EPIRB transmits a distress signal with a beacon-unique identifying code. The system detects the signal, calculates an accurate distress position, checks the unique identifying code against the EPIRB registration database (vessel and point of contact information supplied by the owner) and routes the distress alert with registration information to the responsible U.S. Coast Guard (or international) Rescue Coordination Center (RCC). 406 MHz EPIRBs with GPS (internal or attached) also provide an immediate GPS position in the information passed to the RCC.

Geostationary satellites make detection almost immediate. If the EPIRB does not have the ability to provide a GPS position, the process to determine a position takes about an hour on average and almost always less than two hours.

Satellite EPIRBs also include a homing beacon and strobe to help rescue forces quickly locate the distress scene.

Satellite beacons have significant coverage, alerting timeliness, position accuracy, and signaling advantages over other types of EPIRBs (121.5 MHz). Before purchasing or using an other-than-406MHz EPIRB, be sure you understand its capabilities and limitations.

Mount the EPIRB to float free according to the manufacturer's instructions, if possible. Otherwise, make sure it is readily accessible. Register the EPIRB with NOAA, according to the instructions provided with the beacon. Registration is mandatory, improves response, and reduces false alarms. For more information on how to register your EPIRB, call 1 (301) 457-5678 or go to the following website: http://www.sarsat.noaa.gov/beacon.html.

ADDITIONAL RECOMMENDED EQUIPMENT

Besides meeting the legal requirements, prudent boaters should carry additional safety equipment. The following additional items of equipment are suggested depending on the size, location, and use of your boat. Some of these items may be required aboard certain vessels. You may want to carry:

VHF Radio	First Aid Kit	Bailer	Cell Phone
GPS	Fenders	Binoculars	Food & Water
Charts & Compass	Flashlight	Sun Screen & Sunglasses	Spare Parts
Visual Distress Signals	Tool Kit	Boat Hook	Paddles
Anchor and line	Flashlight	Ring Buoy	AM/FM Radio
Spare Anchor	Mirror	Extra Fuel	Extra Line

COAST GUARD CUSTOMER INFO-LINE

The Coast Guard has a toll-free Info-line that can be useful to boaters within the United States (including Alaska and Hawaii). The Info-line provides information on boats and associated equipment involved in safety defect (recall) campaigns for the past 5 model years. If you own a new boat or are buying a boat and do not know if it has been in a defect campaign you can find out and get instructions on how to get the defect corrected. The Info-line will also take complaints about possible safety defects and assist consumers having difficulty getting corrective action for a safety recall already announced. An Info-line operator can be called Monday through Friday 8:00am to 4:00pm eastern time at (800)-368-5647 or, if in the Washington, DC area, (212) 472-2385.

NOTE: The Info-line cannot help the consumer resolve disputes with boat dealers or manufacturers about service or problems that do not involve safety, make recommendations, or endorse specific boats or product lines.

BOATING ACCIDENT REPORTS

Boating accidents that involve a recreational boat, or its equipment, must be reported immediately to the state boating authority if a person dies, disappears from a vessel under circumstances that indicate death or injury, or is injured and receives medical treatment in addition to normal first aid. A follow-up formal written report is required. The operator must report the accident within 48 hours to the nearest State boating authority and provide the following information:

1. The date, time, and exact location of the accident.
2. The name of each person who died, disappeared, or was injured.
3. The number and name of the vessel.
4. The names and addresses of the owner and operator.

Accidents involving only property or equipment damage must be reported within 10 days if the damage is in excess of $500 (state requirements vary) or total boat loss. If the operator cannot give this notice, each person on board shall notify the state authority, or determine that the notice has been given.

REGATTAS AND MARINE EVENTS

Whenever an organized marine event or regatta is anticipated, a Marine Event Permit Application must be submitted, in triplicate, to the appropriate State Office or Coast Guard Group at least 135 days in advance of the requested event day. Many types of events now require that documentation of the environmental impact of the event be completed before a permit can be issued. Contact the nearest Coast Guard Group if you have any questions. A chart or scale drawing indicating the course that participants will navigate, markers, turning buoys, and any other factors that may affect the passage of any nonparticipating vessels and/or spectators, must accompany the application. Applications will be reviewed and a Marine Event Permit will be issued provided that the required information was included for evaluation and no undue safety hazard would be imposed on any other vessel and/or spectators, or impede the safe passage of non-participants. For further information please call the following State Agencies or the U.S. Coast Guard Group nearest you listed below (or go to http://www.uscg.mil/d13/):

Oregon
Oregon State Marine Board
435 Commercial Stet NE3
Salem, OR 97310
(503) 378-8587

Idaho
Department of Parks & Recreation
Boating Program
PO Box 83720
Boise, IF 83720
(208) 334-4199

Montana
Montana Fish & Wildlife & Parks
Law Enforcement Division
PO Box 200701
Helena, MT 59620
(406) 444-2452

U.S. Coast Guard Groups

Seattle	Port Angeles	Astoria	North Bend	Portland
(206) 217-6026	(360) 417-5840	(503) 861-6211	(541) 756-9210	(503) 240-9301

CHAPTER VI

U.S. COAST GUARD AUXILIARY

BOATING EDUCATION

The U.S. Coast Guard Auxiliary offers courses in boating safety and seamanship courses to the public. They are taught by experienced Auxiliary members. The cost of materials and textbooks is usually the only cost involved. The available courses are:

1. WATER 'N' KIDS: 1 session course, for kindergarten to second grade.
2. BOATS 'N' KIDS: 1 session course, for ages 5-10.
3. BOATING SAFELY: 4 session course, 8 hour NASBLA approved basic boating safety course.
4. BOATING SKILLS AND SEAMANSHIP: 13 session course, powerboat oriented.
5. SAILING AND SEAMANSHIP: 14 session course, sailboat oriented.
6. BASIC COASTAL NAVIGATION: 6 to 8 session course, each session is 2 to 3 hours; covers the basic elements of coastal navigation.
7. ADVANCED COASTAL NAVIGATION: 12+ session course.

Local Flotillas of the U.S. Coast Guard Auxiliary schedule numerous Boating Skills & Seamanship, Boating Safely, Sailing & Seamanship, and Coastal Navigation classes throughout the year. For information please contact your local Auxiliary Flotilla, the Director of Auxiliary office at (206)-220-7081, or the U.S. Boating Hotline at (800)-336-BOAT.

PUBLIC REPORTS TO THE COAST GUARD

Mariners who have any information regarding search and rescue (SAR), false SAR reporting, suspicious boating activities, suspected illicit drug trafficking or other unusual maritime or related activities are encouraged to make prompt, timely, and detailed reports to the nearest Coast Guard unit. Reports can be made in person, by telephone, or by letter.

VESSEL SAFETY CHECKS (VSC)

To determine if your recreational motorboat or sailboat meets Federal and State requirements, as well as recommended safety standards, contact a member of the Coast Guard Auxiliary for a free Vessel Safety Check (VSC). Small commercial fishing vessels and vessels carrying six or fewer passengers for hire are also eligible for VSCs. A decal is awarded to boats that pass the examination. If your boat does not have the proper equipment, NO REPORT IS MADE TO ANY LAW ENFORCEMENT AUTHORITY. The Auxiliary examiner will advise you of the deficiencies so that you can correct them.

A vessel must meet the following Coast Guard Auxiliary standards for award of the VSC decal:

1. Numbering: The boat's registration number must be permanently attached to each side of the forward half of the boat. They must be plane, vertical, block characters, not less than three (3) inches high, and in a color contrasting with the background. A space or hyphen must separate the letters from the numbers. Place State tax stickers according to state policy. (e.g. WA 1234 AB or WA-1234-AB)
2. Personal Flotation Devices: PFDs shall be Coast Guard Approved, in good and serviceable condition, and of suitable size for the wearer. Boats less than 16 feet in length must be equipped with one wearable PFD for each person on board. Boats 16 feet and over must be equipped with one wearable PFD for each person plus one throwable.
3. Fire Extinguishers: Vessel Safety Checks exceed the Federal Regulations by requiring that all vessels carry a minimum of one B-1 fire extinguisher.
4. Ventilation: Requirements are the same as the Federal Regulations (see Chapter VIII for more details).
5. Backfire Flame Arrester: All gasoline inboard motorboats, regardless of date of construction or engine installation, must be equipped with a Coast Guard Approved means of backfire flame control.
6. Sound Producing Devices: For compliance with "Navigation Rules" and for distress signaling purposes, all boats must carry some type of sound producing device capable of a 4 second blast audible for a half mile.
7. Navigation Lights: Vessels less than 16 feet in length are not required to have navigation lights. However, if the boat is equipped with them, they must be properly located and displayed.
8. Visual Distress Signals (VDS): All recreational boats used on coastal waters, Great Lakes, or the high seas, are required to carry Coast Guard Approved VDSs. For vessels operating on inland waters, the Auxiliary requires some means of making a suitable day and night VDS.
9. General Condition: Also known as "seaworthiness". The boat must be free from fire hazards, in good overall condition with the bilges reasonably clean and the visible hull and structure generally sound. The maximum passenger capacity and horsepower must not be exceeded.
    a. Galley Equipment: Appliances and their fuel tanks must be properly secured, and the system must not leak. There must be no flammable material in the vicinity of stoves or heaters. Adequate ventilation must be provided for appliances and their fuel supply. Appliance fuel shut off valves must be readily accessible. Only common appliance fuel may be used on vessels. Gasoline, naphtha, and benzene are not allowed due to their highly volatile nature.
    b. Electrical: Wiring must be in good condition and properly installed. No exposed areas or deteriorated insulation is permitted. The electrical system must be protected by fuses or manual resetting circuit breakers. Switches and fuse panels must be protected from rain or spray. Batteries must be secured to prevent movement and the terminals covered to prevent accidental arcing.

10. State Requirements: State equipment requirements that pertain to basic safety and expand VSC requirements will be checked by the Auxiliary vessel examiner and must be met before a VSC decal can be awarded.
11. Pollution MARPOL Placards: Must be displayed in a conspicuous place in the machinery spaces, or at the bilge pump control station.
12. Navigation Rules: A current copy of the Navigation Rules (COMDTINST M16672.2D) must be onboard.

In addition to the preceding Federal requirements, the Auxiliary also recommends the following to receive a VSC Decal:

1. Fuel Systems: Portable fuel tanks (7 gallon capacity or less) must be constructed of sturdy non-breakable material and in good condition. Tanks shall be free of excessive corrosion and must not leak. Vents must be capable of being closed and the tank must have a vapor-tight, leak-proof cap. All tanks must be properly secured in the boat to prevent excessive movement. Permanent fuel tanks (over 7 gallon capacity) and fuel lines must be free of excessive corrosion and not leak. Fuel tanks must be secured and grounded. The fuel fill pipe must be tightly fitted to the fill plate and located outside the hull, where any spilled fuel will be directed overboard. A vent terminating outboard of the hull and compartments must lead to each permanent fuel tank.
2. Anchor and Anchor Line: The boat should be equipped with an adequate anchor and a line of suitable size and length for locality.
3. Alternate Propulsion: All boats less than 16 feet in length should carry a second method of propulsion (i.e.: paddle, oar, etc.). If an alternate means of mechanical propulsion is carried, it must use separate fuel and starting source from the main propulsion motor.
4. De-watering Device: All boats should carry at least one effective manual de-watering device. This requirement is in addition to any installed electrical bilge pump that the vessel may have on board.

MARINE DEALER VISITATION PROGRAM

The Coast Guard and Coast Guard Auxiliary have an ongoing voluntary visitation program with marine dealers called THE MARINE DEALER VISITATION PROGRAM. Its purpose is to promote recreational boating safety through the assistance of marine dealers. A qualified Auxiliarist establishes rapport with a dealer through quarterly visits to provide boating safety information. Dealers receive updates on regulations, information on vessel safety checks, and boating safety public education course schedules. The Auxiliarist also provides the participating dealer a literature rack with a variety of free boating-related brochures and pamphlets for customers. Advantages are as follows:

1. A participating dealer is placed on the Coast Guard mailing list for the BOATING SAFETY CIRCULAR and all CONSUMER FACT SHEETS.
2. This special boating safety knowledge gives the dealer a more professional image with consumers.
3. The dealer's public service image is enhanced by being able to advise customers on such subjects as required equipment and how to save money on boat insurance by taking a boating safety course.
4. The dealer can easily answer questions or provide information to the consumer.
5. The dealer has an attractive display of Boating Safety literature to offer customers.
6. The dealer has an opportunity to attract customers by providing the space for Auxiliary boating safety classes on the premises.
7. The dealer can stimulate sales of safety equipment by promoting Auxiliary VSC’s.
8. The dealer has the distinction of being awarded a "Cooperating Marine Dealer" decal to display prominently on their door or window.
9. The dealer has the satisfaction of cooperating in a promotion aimed at saving lives. The dealer establishes a "Public Service/Boating Safety" image.

AUXILIARY MEMBERSHIP/INFORMATION

Membership in the U.S. Coast Guard Auxiliary offers an exciting opportunity to help your fellow boaters while improving your own boating skills. As the volunteer civilian arm of the Coast Guard, Auxiliarists patrol marine parades and regattas, assist boaters in distress, conduct Vessel Safety Checks, and conduct safe boating courses for members and the public. For further information on the Auxiliary and its programs contact your local Auxiliary flotilla or Commander (oax), Thirteenth Coast Guard District, Room 3584, 915 Second Avenue, Seattle, WA 98174-1067 or (206) 220-7081.

http://safetyseal.net/pdf_files/VSC_204_7-20-00.pdf

-Vessel Safety Check page 1-

CHAPTER VII

AIDS TO NAVIGATION

CAUTION TO BE USED IN RELIANCE UPON AIDS TO NAVIGATION

The aids to navigation depicted on charts comprise a system of fixed and floating aids that have varying degrees of reliability. Therefore, prudent mariners will not rely solely on any single aid to navigation, particularly a floating aid. With respect to buoys, the buoy symbol is used to indicate the approximate position of the buoy body and sinker, which secures the buoy to the seabed. The approximate position is used because of practical limitations in positioning and maintaining buoys and their sinkers in precise geographical locations. These limitations include, but are not limited to, inherent imprecision in position fixing methods, prevailing atmospheric and sea conditions, the slope and the material making up the seabed, the fact that the buoys are moored to sinkers by varying lengths of chain, and the fact that buoy body and/or sinker positions are not under continuous surveillance but are normally checked only during periodic maintenance visits which occur more than a year apart. The position of the buoy body can be expected to shift inside and outside the charting symbol due to the forces of nature. The mariner is also cautioned that buoys are liable to be carried away, shifted, capsized, sunk, etc. Lighted buoys may be extinguished or sound signals may not function as the result of ice, running ice or other natural causes, collisions, or other accidents. For the foregoing reasons, a prudent mariner must not rely solely upon the position or operation of floating aids to navigation, but must also utilize bearings from fixed objects and aids to navigation on shore. Further, a vessel attempting to pass close aboard always risks collision with a yawing buoy or with the obstruction the buoy marks.

SEASONAL AIDS TO NAVIGATION

Due to severe weather conditions and reduced vessel traffic during the winter, numerous aids to navigation (i.e.: lights, buoys, fog signals) are seasonally discontinued, withdrawn, or replaced by smaller aids. These changes occur at regular intervals each year. The approximate dates are specified in the Light List, Volume VI, Pacific Coast and Pacific Islands (COMDTPUB P16502.6) in column 8 or below the heading. The date seasonal aids are deployed may also be printed on nautical charts produced by the National Ocean Service. The actual dates the aids are deployed may be changed due to adverse weather or other conditions. Mariners should consult the Coast Guard's Local Notices to Mariners and listen to Broadcast Notices to Mariners for the latest information.

OFFSHORE AIDS TO NAVIGATION - CAUTION

Courses should invariably be set to pass offshore aids to navigation with sufficient clearance to avoid the possibility of collision or grounding. Errors of observation, current and wind effects, other vessels in the vicinity, and defects in steering gear may be, and have been, the cause of actual collisions, or damage to these important aids to navigation. Experience shows that buoys cannot be safely used as leading marks to be passed close aboard, and should always be left well off the course whenever searoom permits. When approaching an offshore light structure, large navigational buoy, or a station on a submarine site, on radio bearings, the risk of collision will be lessened by insuring that the radio bearing does not remain constant. It should be borne in mind that most large buoys are anchored to a very long scope of chain and, as a result, the radius of their watch circle is considerable. The charted position is the approximate location. Furthermore, under certain conditions of wind and current, they are subject to sudden and unexpected sheers, which are certain to hazard a vessel attempting to pass close aboard. Watch (station) buoys are sometimes moored near large buoys to mark the approximate station of the large buoy. Since these buoys are always unlighted and, in some cases, moored as much as a mile from the large buoy, the danger of a close passing vessel colliding with them is always present, particularly during night or periods of reduced visibility.

VANDALISM OF AIDS TO NAVIGATION

Frequently Coast Guard operated aids to navigation are damaged, defaced, or destroyed by vandals. This type of irresponsible activity not only creates a serious condition for the mariner, but also increases the cost to the taxpayer. The primary targets for vandals are usually buoys and lights on structures located on the ends of jetties and breakwaters. Federal laws provide that those apprehended defacing or destroying a Federal aid to navigation shall be guilty of a misdemeanor and are subject to a fine of up to $2,500, or not less than $500, or imprisonment or both. Those providing information leading to a conviction may be paid one half of such a fine. All citizens are requested to report sightings of any vandalism to the nearest Coast Guard unit; local law enforcement authority; or by calling Commander, Thirteenth Coast Guard District (oan) at (206) 220-7270.

INTERFERENCE WITH AIDS TO NAVIGATION

In accordance with Title 33, Code of Federal Regulations, Subpart 70.01; "No person shall obstruct or interfere with any aid to navigation established and maintained by the Coast Guard, or any private aid to navigation established and maintained in accordance with Title 33, Code of Federal Regulations, Parts 64, 66, or 67. Any person violating the provisions of this section shall be deemed guilty of a misdemeanor and be subject to a fine not exceeding the sum of $500 for each offense, and each day during such violation shall continue shall be considered a new offense."

REQUIRED REPORTING OF DAMAGED AIDS TO NAVIGATION

It frequently occurs that aids to navigation are collided with; causing damage and displacement, or complete loss, without the knowledge of the Coast Guard. The replacement or repair of such aids is consequently often not as prompt as desired. This situation results in diminished protection for marine traffic, and is attributable in large part to the failure of vessel operators to furnish notice of these collisions to the nearest local Coast Guard unit as required by law and regulation. The prompt submission of notice of any marine casualty or accident, including damage or destruction of aids to navigation, is required by the Marine Investigation Regulations, Title 46 Code of Federal Regulations, Section 4.05-20, with penalty for noncompliance. If you see another vessel or an individual damage or destroy an aid to navigation, or if an aid is not watching properly in accordance with the Coast Guard Light List, you should report the incident to the nearest Coast Guard unit.

NOTE: Each Coast Guard Group Office phone number noted in Chapter V of this Special Notice to Mariners is a 24 hour number that can be called to report any discrepancy in aids to navigation. The District Office 24 hour number is (206) 220-7001.

PROPOSED CHANGES IN AIDS TO NAVIGATION

Periodically the Coast Guard evaluates its system of aids to navigation to determine whether the conditions for which the aids were established have changed. When changes occur, the feasibility of improving, relocating, or discontinuing aids is considered. Comments on proposed changes should be addressed to: Commander (oan), Thirteenth Coast Guard District, 915 Second Avenue, Seattle, WA 98174-1067. All comments submitted should include the following information:

1. Type of user, including length and draft of vessel.
2. What type of navigation equipment does the vessel have?
3. How do you navigate when transiting the area?
4. Number of transits annually? Are they seasonal or year-round, day or night?
5. The number of passengers and the type, quantity, and value of cargo carried.
6. If you have an alternative proposal to be considered submit a chart section or sketch showing proposal.

PRIVATE AIDS TO NAVIGATION

Private aids to navigation include all marine aids to navigation operated in the navigable waters of the United States other than those operated by the Federal Government or those operated in State waters of private use. No person, public body or other instrumentality not under the control of the Commandant, exclusive of the Armed Forces, shall establish and maintain, discontinue, or change or transfer ownership of any aid to maritime navigation, without first obtaining permission to do so from the Commandant, for more information consult title 33 Code of Federal Regulations, Part 66. In order to make application to establish and maintain, discontinue, change, or transfer ownership of a private aid to navigation, a person or instrumentality shall submit a "Private Aids to Navigation Application" (CG-2554) to the Commander of the nearest Coast Guard District. To obtain a CG-2554 write Commander (oan), Thirteenth Coast Guard District, 915 Second Avenue, Room 3510, Seattle, WA 98174-1067, or call (206) 220-7270.

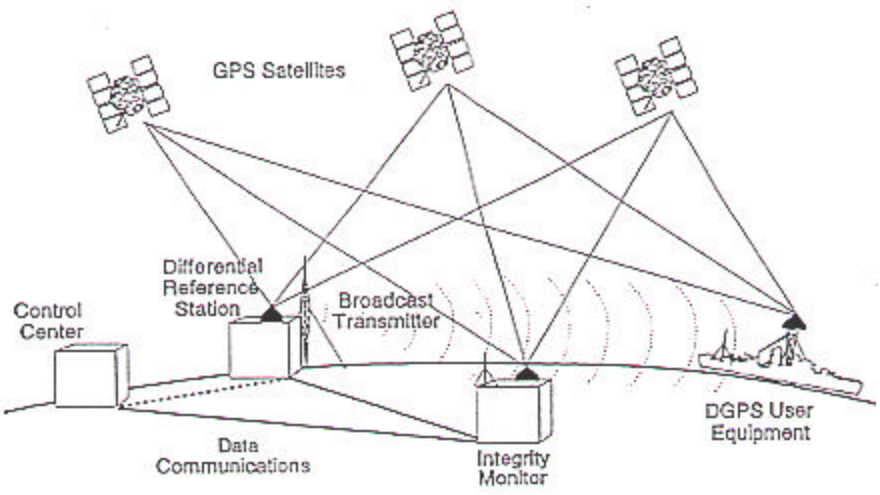
DIFFERENTIAL GLOBAL POSITIONING SYSTEM (DGPS)

1. WHAT is DGPS? Differential GPS (DGPS) is the regular Global Positioning System (GPS) with an additional correction (differential) signal added. This correction signal improves the accuracy of the GPS and can be broadcast over any authorized communication channel.

2. HOW does it work? The GPS determined position of a reference station is computed and compared to it's surveyed geodetic position. The differential information is transmitted to user receivers by radio or other means. DGPS receivers collect navigational signal from all satellites in view, plus differential corrections from a DGPS station in the area.

3. WHY use it? DGPS accuracy and integrity are better than GPS. Accuracy Improvement (2drms): 10 meters or better for DGPS (USCG signals) vs. 100 meters or better for GPS (Standard Positioning Service). Integrity Improvement: Provides an independent check of each GPS satellite's signal, and reports whether it's good or bad.

DGPS SYSTEM ELEMENTS



GLOBAL POSITIONING SYSTEM - SYSTEM SPECIFICATIONS

The Global Positioning System (GPS) is a highly precise, satellite based radionavigation system providing three dimensional positioning, velocity and time information. GPS is an all weather system whose coverage is continuous and worldwide. GPS receivers collect signals from satellites in view. They display the user's position, velocity, and time, as needed for their marine, terrestrial, or aeronautical applications. GPS is used to support land, sea and airborne navigation, surveying, geophysical exploration, mapping and geodesy, vehicle location systems, and a wide variety of additional applications. GPS is provided at two levels of service, the Standard Positioning Service (SPS) for general public use and an encoded Precise Positioning Service (PPS) primarily intended for use by the Department of Defense. SPS signal accuracy can be intentionally degraded to protect U.S. national security interests. This process called Selective Availability (SA), controls the availability of the systems full capabilities. Effective 01 May 2000, Selective availability was set to zero, which means all user receive the same level of service. The SPS accuracy specifications, given below, include the effects of SA. SPS is planned to provide predictable accuracies of within:

1. 100 meters (2 drms) horizontal156 meters (2 Sigma) vertical
2. 300 meters (99.99% prob.) horizontal
3. 340 nanoseconds time (95% prob.)
4. Coverage is continuous and worldwide, with a position dilution of precision (PDOP) of 6 or less.

THIRTEENTH COAST GUARD DISTRICT DGPS SITES:

WHIDBEY ISLAND, WA
48-18-44.773N 122-41-46.061W
Status: On-line
Transmission Frequency: 302 kHz
Transmission Rate: 100 BPS
RTCM Type 9 correction message
Signal Strength: 75uV at 90 NM

ROBINSON POINT, WA
47-23-18.953N 122-22-26.745W
Status: On-line
Transmission Frequency: 323 kHz
Transmission Rate: 100 BPS
RTCM Type 9 correction message
Signal Strength: 100uV at 60 NM

FORT STEVENS, OR
46-12-18N 123-57-21W
Status: On-line
Transmission Frequency: 287 kHz
Transmission Rate: 100 BPS
RTCM Type 9 correction message
Signal Strength: 100uV at 180 NM

APPLETON, WA
45-46-53.0N 121-19-33.0W
Status: On-line
Transmission Frequency: 300 kHz
Transmission Rate: 100 BPS
RTCM Type 9 correction message
Signal Strength: 100uV at 250 NM

COAST GUARD NAVIGATION CENTER-SERVICES

The Coast Guard Navigation Center (NAVCEN) provides civil users with information about GPS system and satellite status, almanac date, and precise ephemeris data. The NAVCEN also provides information about Differential GPS, Omega, Loran-C, radiobeacons, and Local Notice to Mariners. Information can be obtained through a computer bulletin board, voice status recording, and voice and data broadcast. NAVCEN personnel are prepared to respond to individual users inquiries, comments, or concerns regarding civil access to and the use of the GPS system. The NAVCEN Voice Recording telephone number is (703) 313-5907. Civilian users can contact a NAVCEN watchstander at (703) 313-5900. The NAVCEN information service is used worldwide by civil users to support land, sea and airborne navigation, mapping and geodesy, vehicle location systems, and a wide variety of additional applications. The Bulletin Board System and Voice Status Recording are available 24 hours a day. Watchstanders answer questions by telephone and mail 24 hours a day. For additional information, contact: Commanding Officer, Navigation Center, 7323 Telegraph Road, Alexandria, VA 22310-3998.

COAST GUARD LIGHT LISTS

For more information concerning aids to navigation, both Federal and private, a mariner should obtain a copy of the U.S. Coast Guard Light List for their area. The following is a list of these publications:

1. VOLUME I, ATLANTIC COAST - describes aids to navigation from St. Croix River, Maine to Toms River, New Jersey.
2. VOLUME II, ATLANTIC COAST - describes aids to navigation from Toms River, New Jersey to Little River, South Carolina.
3. VOLUME III, ATLANTIC AND GULF COASTS - describes aids to navigation from Little River, South Carolina to Econfina River, Florida.
4. VOLUME IV, GULF OF MEXICO - describes aids to navigation from Econfina River, Florida to Rio Grande, Texas.
5. VOLUME V, MISSISSIPPI RIVER SYSTEM - describes aids to navigation on the Mississippi River and its navigable tributaries.
6. **VOLUME VI, PACIFIC COAST AND PACIFIC ISLANDS** - describes aids to navigation on the Pacific Coast and outlying Pacific Islands.
7. VOLUME VII, GREAT LAKES - describes aids to navigation on the Great Lakes and the St. Lawrence River above St. Regis River.

NOTE: For the U.S. West Coast and Pacific Islands a mariner only has to purchase LIGHT LIST VOLUME VI as listed above.

RADIONAVIGATION - USER INFORMATION

Loran-C information concerning current operational status of all Navigation Center (NAVCEN) Loran-C chains is available from the Coordinator of Chain Operations (COCO). The COCO monitors the daily operations of their Loran-C chain. For information concerning a chain's operations contact:

1. COCO U.S. West Coast (9940) located at Petaluma, CA, Phone: (707) 765-7590.
2. COCO Canadian West Coast (5990) located at Williams Lake, BC, Canada, V2G 2V7. Phone: (604) 965-5680.
3. COCO Gulf of Alaska (7960) and North Pacific (9990) located at Petaluma, CA, Phone: (707) 765-7587.
4. NAVSAT transit status is available from Defense Mapping Agency Washington, DC, Phone (202) 227-3173 or Autovon 287-3173.

LORAN INFORMATION

LORAN-C is a pulsed low frequency (LF), hyperbolic radionavigation system. It derives its high accuracy from time difference measurements of the pulsed signals and the inherent stability of LF propagation. Wide coverage areas are made possible by the low propagation losses of LF ground waves and the resultant long baseline lengths (station-to-station separation). The LORAN-C navigation system operates on the principle that the difference in time of arrival of signals from two stations observed at a point in the coverage area, is a measure of the difference in distance from the point of observation to each of the stations. The locus of all points having the same observed difference in distance to a pair of stations is a hyperbola, called a line of position (LOP). The intersection of two or more LOPs defines the position of the observer. LORAN-C chains are comprised of a master transmitting station and at least two secondary transmitting stations. The transmitting stations are located such that the signals from the master and at least two secondary stations can be received throughout the desired coverage area. The master station is designated by the letter "M" and the secondary stations are designated "W,X,Y or Z". Thus, a particular master-secondary pair and the time difference (TD) which it produces can be referred to by the letter designations of both stations or just that of the secondary (e.g. MX time difference or TDX). A LORAN-C receiver, which will be useful to the limits of the Coast Guard's advertised coverage area for the U.S. Coastal Confluence Zone (CCZ), has the following characteristics:

1. Acquires the LORAN-C signals automatically, without the use of an oscilloscope
2. Accomplishes cycle matching on all pulses to take advantage of the maximum accuracy of the System
3. Automatically tracks the signals once they have been acquired
4. Displays two time difference readings

To acquire the LORAN-C signals it is important to enter into the receiver the Group Repetition Interval (GRI) of the local LORAN-C Chain. The GRI that covers the U.S. West Coast is designated the 9940 rate. Rate 5990 is designated for the Canadian West Coast Chain. The speed at which the receiver will find the LORAN-C signals depends upon the signal strength

and how much interference is present. In some receivers, the operator can speed up the process by pre-selecting the approximate LORAN-C readings he expects to read. Most receivers will be automatically tracking within 5 minutes of initial turn-on, and will continue to track until the receiver is turned off. If a user is at a known location, such as dockside, it will be obvious to the user when the receiver is providing the correct information. Determining a vessel's location on a chart is a very simple matter and is accomplished by the following steps:

1. Examine the LORAN-C chart of the area in which you are operating. You will see several sets of LORAN-C lines of position (LOPs) marked with different numbers, and colors.
2. Read the first LORAN-C time difference indicated by the receiver. Go to the chart and locate the line which most closely fits that reading. By examining the adjacent lines, you should be able to interpolate easily, to determine where the line which corresponds to your reading is to be plotted.
3. Read the second LORAN-C reading from your receiver and repeat step 2.
4. Your vessels position at the time the readings were taken is at the intersection of the lines drawn in steps 2. and 3.

Sometimes you will find one or both of the following conditions has occurred:

1. The LOPs are almost parallel, thus making it difficult to accurately determine the vessels position.
2. A small change in the LORAN-C reading will cause a large change in the position of the corresponding LOP (i.e., the lines are spaced farther apart than other sets on the same chart). If either or both of these things happen, the proper procedure is to re-lock one channel of the receiver to a different secondary station signal.

The LORAN-C System can tell you where you are within one-tenth to one-half nautical mile (geodetic accuracy) and can help you return to the same spot, time after time (repeatable accuracy) within 50 to 300 feet, depending on your location within the LORAN coverage area (and correcting for errors). Remember, a prudent navigator never places complete faith solely on one navigational system. North Pacific Ocean LORAN-C Chain Data and Coverage Diagrams are included on pages to follow. More information on the LORAN system can be obtained by visiting, writing, or phoning:

Commander (oan)
13th Coast Guard District
915 Second Avenue, Room 3510
Seattle, WA 98174-1067
(206) 220-7270

PACIFIC OCEAN LORAN-C CHAIN DATA

Station	Latitude	Longitude
CANADIAN WEST COAST CHAIN - 5990		
Williams Lake, British Columbia - Master.....	51° 57' 58.9"N	122° 22' 01.7"W
Shoal Cove, Alaska - Xray.....	55° 26' 20.9"N	131° 15' 19.7"W
George, WA - Yankee.....	47° 03' 48.0"N	119° 44' 39.5"W
Port Hardy, British Columbia - Zulu.....	50° 36' 29.7"N	127° 21' 29.4"W
GULF OF ALASKA CHAIN - 7960		
Tok, Alaska - Master.....	63° 19' 42.8"N	142° 48' 31.9"W
Narrow Cape, Alaska - Xray.....	57° 26' 20.2"N	152° 22' 11.3"W
Shoal Cove, Alaska - Yankee.....	55° 26' 20.9"N	131° 15' 19.7"W
NORTH CENTRAL CHAIN - 8290		
Havre, Montana - Master	48° 44' 38.6"N	109° 58' 53.6"W
Baudette, Minnesota - Whiskey	48° 36' 49.9"N	094° 33' 17.9"W
Gillette, Wyoming - Xray	44° 00' 11.3"N	105° 37' 23.9"W
Williams Lake, British Columbia - Yankee	51° 57' 58.9"N	122° 22' 01.7"W
U.S. WEST COAST CHAIN - 9940		
Fallon, Nevada - Master	39° 33' 06.6"N	118° 49' 56.4"W
George, WA - Whiskey.....	47° 03' 48.0"N	119° 44' 39.5"W
Middletown, California - Xray.....	38° 46' 57.0"N	122° 29' 44.5"W
Searchlight, Nevada - Yankee.....	35° 19' 18.2"N	114° 48' 17.4"W
NORTHWEST PACIFIC CHAIN - 9970		
Iwo Jima, Volcano Island - Master.....	24° 48' 03.6"N	141° 19' 30.3"E
Marcus Island - Whiskey.....	24° 17' 07.9"N	153° 58' 53.2"E
Hokkaido, Japan - Xray.....	42° 44' 37.1"N	143° 43' 09.2"E
Gesashi, Japan - Yankee.....	26° 36' 25.0"N	128° 08' 56.4"E
Barrigada, Guam - Zulu.....	13° 27' 49.9"N	144° 49' 32.4"E
NORTH PACIFIC CHAIN - 9990		
St Paul, Alaska - Master.....	57° 09' 12.3"N	170° 15' 06.8"W
Attu, Alaska - Xray.....	52° 49' 44.1"N	173° 10' 49.5"W
Port Clarence, Alaska - Yankee.....	65° 14' 40.3"N	166° 53' 12.6"W
Narrow Cape, Alaska - Zulu.....	57° 26' 20.2"N	152° 22' 11.3"W
RUSSIAN AMERICAN CHAIN - 5980		
Petropovlovsk, CIS, - Master.....	53° 07' 47.6"N	157° 41' 42.9"E
Attu, Alaska - Xray.....	52° 49' 44.1"N	173° 10' 49.5"W
Alexandrovsk, CIS - Yankee.....	51° 04' 42.8"N	142° 42' 04.9"E

NOTE: Position coordinates are based upon World Geodetic System 1972 (WGS-72).

CHAPTER VIII

VESSEL TRAFFIC SERVICE

GENERAL INFORMATION:

The Puget Sound area and the waters of the Pacific Northwest provide several fine harbors for commercial and public vessels. The area historically has also supported a valuable fishery (both commercial and recreation) and a large, and ever increasing, recreational fleet. Puget Sound Vessel Traffic Service (PSVTS) plays a major role in ensuring the continued safe use of these waters by its many diverse users. The purpose of PSVTS is to facilitate the safe and efficient transit of vessel traffic to assist in the prevention of collisions or groundings that could cost lives, property damage, or subject the waters of this beautiful area to environmental harm. Additionally, by facilitating the safe and efficient flow of commerce, PSVTS serves as an intermodal partner in supporting the evolving National Transportation System. Many PSVTS regulations are applicable to all vessels, no matter the size, operating in the Puget Sound Vessel Traffic Service Area, while certain regulations are applicable only to vessels of certain length, tonnage, and/or engaged in certain specific activities. It is incumbent upon the operator of any vessel in this area to be familiar with the regulations for the particular type vessel being operated. The Ports and Waterways Safety Act, as amended, prescribes civil and criminal penalties for violation of the regulations. Regulations governing the operations of PSVTS are found in Title 33 Code of Federal Regulations Part 161 and are reprinted in the VTS Users Manual.

USER GROUPS:

1. VESSEL MOVEMENT REPORTING SYSTEM (VMRS) USERS (Full Participation): The vessels listed below must, in addition to monitoring the designated VTS VHF FM frequency, make reports to the VTS, and comply with general VTS operating rules:

    a. A power driven vessel of 40 meters (approximately 131 feet) or more in length, while navigating;
    b. A commercial vessel engaged in towing of 8 meters (approximately 26 feet) or more in length, while navigating;
    c. A vessel certificated to carry 50 or more passengers for hire, when engaged in trade.

2. VTS USERS (Passive Participation): The vessels listed below must must monitor the designated VHF FM VTS frequency for the area in which they are operating, must respond if hailed, and comply with general VTS operating rules:

    a. A power driven vessel of 20 meters (approximately 66 feet) or more in length;
    b. A vessel of 100 gross tons or more carrying 1 or more passengers for hire;
    c. A dredge or floating plant

3. NON REQUIRED VESSELS: If you do not fall into either of the above categories, you are not required by law to participate with the VTS. However, your vessel is still subject to:

    a. Colregs Rule 10
    b. VTS Measures (direction given by the VTS)
    c. All other practices of safe navigation and prudent seamanship

NON-PARTICIPANT REGULATIONS:

Operators of all vessels should be aware that even when not required to participate in the VTS they are required to follow the Rules to the Road. In particular they are required to abide by Rule 10 when navigating in or near the Traffic Separation Scheme (TSS). Small vessels that choose to operate within the TSS shall abide by the regulations with due regard to traffic flow and priority.

USERS MANUAL:

In addition to the general information provided in this Special Notice to Mariners, the Coast Guard publishes a "Users Manual" for VTS, which contains a more in-depth discussion of VTS operating procedures, plus further explanatory notes discussing anchorages, certain dangerous cargo, and Special Rules during certain fishing seasons in the Puget Sound area. All mariners transiting VTS waters are encouraged to obtain a copy of the Users Manual by calling PSVTS at (206) 217-6040 or from their website at www.uscg.mil/d13/units/vts/psvts.html.

VTS COMPONENTS:

TRAFFIC SEPARATION SCHEME (TSS)
The Traffic Separation Scheme (TSS) in the PSVTS area has been adopted by the International Maritime Organization (IMO). Therefore, the TSS is subject to the provisions of Rule 10 of the 1972 Collision Regulations. The traffic lanes and separation zone which comprise the TSS are depicted on nautical charts. The TSS is a network of one-way traffic lanes, with separation zones in between the opposing traffic lanes; and precautionary areas where vessels normally enter or exit the traffic lanes. Mariners are reminded that vessels in the TSS are required to proceed in the direction of the lane they are in and keep the Separation Zone and Traffic Separation Scheme Buoys to port even if they are not required to participate with VTS. Throughout the PSVTS area, International Collision Regulations apply.

VESSEL MOVEMENT REPORTING SYSTEM (VMRS)
The VMRS is based upon a VHF-FM communication network monitored continuously by SEATTLE TRAFFIC. This network consists of thirteen communications sites, located throughout the VTS area, allowing mariners to contact SEATTLE TRAFFIC while normally only using low power (1 watt) on their VHF-FM radio. SEATTLE TRAFFIC may not have first hand knowledge of all hazardous conditions that exist in the VTS area, so unreported hazards may confront the mariner at any time. Such hazards should be reported so they may pass that information on to other mariners. Much of the information processed by SEATTLE TRAFFIC is collected from vessel reports, and mariners are cautioned that advisories based on these reports are only as accurate as the information given to SEATTLE TRAFFIC from vessels in the area.

SURVEILLANCE SYSTEMS
Twelve strategically located radar sites help "paint" a picture of the traffic conditions throughout the area. These sites provide coverage of approximately 2,900 square miles, which includes the Strait of Juan de Fuca, Rosario Strait, and Puget Sound from Point Wilson south to Tacoma. Additionally, closed circuit television (CCTV) provides coverage of various critical waterways.

COMMUNICATIONS:
In an effort to better serve the maritime community, Puget Sound Vessel Traffic Service (PSVTS) is a multi-channel communication system. VHF-FM Channel 5A (156.25MHz) is the primary frequency for all waters north of a line from Nodule Point to Bush Point on the west side of Whidbey Island and waters north of Possession Point (47° 54' 00"N) on the east side of Whidbey Island. This includes the Strait of Juan de Fuca, Rosario Strait, Saratoga Passage, and all associated waters. VHF-FM Channel 14 (156.70 MHz) continues to be the primary frequency used south of the waters mentioned above including Elliott Bay and Commencement Bay. PSVTS will shift the participating vessels at the designated frequency change lines to the appropriate frequency. Operators of small recreational and fishing vessels less than 20 meters in length are not required to participate, but are encouraged to monitor the VTS operating frequencies. This can be a valuable source of local vessel movement and weather information.

1. Each VMRS User and VTS User must have radiotelephone equipment onboard capable of operation from its navigational bridge and maintain a listening watch on Channel 13 (156.650 MHz), and on the designated VTS frequency.
   NOTE: A single VHF/FM radio capable of scanning, or with "dual watch: capability, will not meet the requirements of two radios.
2. A VHF watch on Channel 16 is not required on vessels subject to the Vessel Bridge to Bridge Radio Telephone Act, and participating in the Vessel Traffic Service when maintaining a watch on both the vessel bridge-to-bridge frequency and the designated VTS frequency.
3. A person required to maintain a listening watch must be able to communicate in the English language. If experiencing difficulties, use of Message Markers (see page 67) is encouraged.
4. Any fixed or portable radiotelephone equipment capable of transmitting and receiving on the designated VHF frequency may be used.

REPORTS REQUIRED OF VMRS USERS:

1. Providing Sailing Plan (SP). Call "Seattle Traffic" at least 15 minutes, but not more than 45 minutes, before navigating in the VTS area. On initial call, provide your vessels name and the general location of your vessel to permit VTS operators to select the proper radio transmission site. After "Seattle Traffic" answers your radio call, provide the following information about your voyage:

   a. Vessels name and type
   b. Position
   c. Destination and Estimated Time of Arrival (ETA)
   d. Anticipated speed of advance
   e. Intended route
   f. Time and point of entry into the Seattle Traffic Area
   g. Dangerous cargo on board or in your tow, if applicable

2. Providing Position Information - Position Report (PR). You must report your vessels name and position:

    a. When you get underway or enter the VTS area
    b. When inbound in the Strait of Juan de Fuca at 124° 00' 00" W longitude.
    c. When directed by Seattle Traffic

3. Providing Updated Information - Sailing Plan Deviation Report (DR). You must provide updated information:

    a. When your ETA to a destination changes by more than 30 minutes
    b. If you intend to deviate from the TSS or a VTS issued measure
    c. If you intend to operate differently than previously reported

4. Providing Destination Information - Final Report (FR). Upon arrival at your destination, or when leaving the VTS area, you must provide:

    a. Name of Vessel
    b. Vessel position
    c. Your intention to check out of the system

5. Reporting Exemptions. Due to the nature of their operation, unless otherwise directed, the following vessels are exempted from providing Position and Final Reports:

    a. Vessels on a published schedule and route.
    b. Vessels operating within an area of a radius of three nautical miles or less.
    c. Vessels escorting another vessel or assisting another vessel in maneuvering procedures.

Vessels exempt from making a final or position report must:

    a. Provide a sailing plan at least five minutes but not more than 15 minutes before navigating within the VTS area.
    b. If vessel departs from its schedule by more than 15 minutes or changes its limited operating area, make the established VMRS reports, or report as directed.

6. Providing Marine casualty or hazardous condition information reports (VRMS User and VTS User). Call "Seattle Traffic" immediately whenever involved in a (an):

    a. Grounding
    b. Collision with a fixed or floating object
    c. Striking of a bridge
    d. Loss of propulsion, steering or reduction in ability to safely navigate or maneuver.
    e. Occurrence adversely affecting seaworthiness or causing property damage in excess of $25,000, (including fire, explosion, flooding, etc).
    f. Incident adversely affecting the environmental quality of a waterway.
    g. Incident involving hazardous materials.
    h. Loss of life or injury requiring professional medical attention.

NOTE: It is critical that VTS receives timely information on bridge strikes to prevent possible loss of life.

PASSING ARRANGEMENTS/USE OF CHANNEL 13:
Passing arrangement not only clarify navigational information for the vessel involved, but also for other vessels in the area. PSVTS watchstanders routinely monitor Channel 13 and expect to hear passing arrangements during close quarters situations. PSVTS will query vessels if passing arrangements are not heard on Channel 13. Mariners should refrain from making passing arrangements on frequencies other than Channel 13. Regulations require all VMRS users to make passing arrangements while operating in a "VTS Special Area." To reduce frequency abuse, recreational boaters shall avoid using Channel 13 for making calls to locks and bridges unless essential for navigation safety.

FERRY ADVISORIES:
Seattle Traffic will not repeat departure information on Washington State ferries on a normal basis. Participants are required to monitor the VTS channel and therefore can hear the Washington State ferries announce their departure; however, when visibility drops below two miles Seattle Traffic will pass Washington State ferry transit information to all affected participants.

VESSEL SIZE RESTRICTIONS:
Tank vessels larger than 125,000 deadweight tons (DWT) bound for a port or place in the U. S. may not operate in Washington waters east of a line extending from Discovery Island Light to New Dungeness Light. Vessels of 40,000 DWT or above may not enter Rosario Strait unless permission to enter is obtained from Seattle Traffic.

VTS SPECIAL AREA REGULATIONS: If transiting Rosario Strait or Guemes Channel:

1. Towing vessels shall not impede the passage of a vessel of 40,000 dead weight tons or more.
2. A vessel of 100 meters or more in length will not be allowed to meet or overtake; or, cross or operate within 2000 yards of a vessel of 40,000 dead weight tons or more (except when crossing astern).
3. A vessel of 40,000 dead weight tons or more will not be allowed to meet or overtake; or, cross or operate within 2000 yards of a vessel of 100 meters or more in length (except when crossing astern).
4. Vessels of 40,000 dead weight tons or more require authorization from Seattle Traffic to enter or get underway in Rosario Strait and/or Guemes Channel. A vessel requiring authorization shall provide at least 15 minutes notification prior to entering or getting underway within Rosario Strait or Guemes Channel.
5. Vessels experiencing maneuverability or navigational difficulties, or any other situation that may impair their safe transit, must report this to Seattle Traffic before entering or getting underway in either Rosario Strait or Guemes Channel.
6. Vessels required to fully participate with VTS (VMRS Users) must communicate on channel 13 to make safe passing arrangements before meeting, crossing or overtaking any other VMRS User.

NOTE: Definitions of Guemes Channel/Rosario Strait geographic boundaries can be found in 33CFR Part 161.55(c).

REGULATED NAVIGATION AREAS (RNA):
33 CFR Section 165.1301 will apply only when implemented by Puget Sound Vessel Traffic Service (PSVTS) in a defined area where hazardous levels of vessel traffic congestion are deemed to exist. PSVTS will broadcast implementation provisions of the RNA on the designated PSVTS frequency.

DEVIATIONS TO REGULATIONS:
Deviations will be granted for Navigational Safety reasons only. However, deviations from these regulations can be granted verbally for one-time transits by Seattle Traffic; or for extended periods by written authorization from the Commanding Officer, Marine Safety Office Puget Sound, 1519 Alaskan Way South, Seattle, WA 98134-1192.

NOTE: In emergency situations, specific verbal requests are not required, however, you should notify Seattle Traffic as soon as possible.

DIRECTIONS:
All vessels must comply with orders issued by SEATTLE TRAFFIC. The Coast Guard wishes to stress that under normal circumstances SEATTLE TRAFFIC will not exercise direct control over vessel movements. However, when the situation dictates, the VTC can and will direct vessel movement. The responsibility of the person directing the movement of a vessel for the safe navigation and maneuvering of his/her vessel is in no way lessened by this regulation. The primary function of a VTS is to enhance good order and predictability on a waterway.

VESSEL SPEED AND WAKE CONTROL:
Each vessel operator is responsible for operating their vessel at a safe speed, especially in reduced visibility, and for the wake created by their vessel. When a tide exceeds a stage of 11.0 feet at Seattle, there is an increased risk of vessel wakes endangering persons and/or property along the shoreline within the VTS area. All vessels operating within the VTS Area should proceed at a speed that will minimize the risk of wake damage while maintaining the ability to maneuver safely. The VTS will begin tidal advisory broadcasts 30 minutes before the tide is predicted to exceed 11.0 feet in Seattle. This advisory will be rebroadcast every 30 minutes until the tidal state has subsided.

ANCHORAGE RESERVATIONS:
PSVTS manages the anchorages in Puget Sound and adjacent areas for the Captain of the Port. For safety reasons, each anchorage has a restricted number of anchorage spaces available, and are normally reserved on a "first come, first served" basis. To allow a more efficient and fair allocation of available space, we ask that:

1. Reservations be made as far in advance of arrivals as possible.
2. Revisions to ETA's and ETD's be made as soon as they become known. Reservations are only valid for the time span requested. A vessel staying past the ETD may be subject to movement orders to make room for an inbound vessel with a reservation. Anchorage reservations will not be accepted in high usage areas, such as Elliott Bay or Port Angeles, if there is a possibility of delay due to uncertain orders. With these considerations, the occasions of a vessel being denied anchorage or being ordered to depart to make room for another vessel should be infrequent.

FREE TOURS:
Interested parties are encouraged to visit the Vessel Traffic Center; visiting hours are from 0800 to 1800 daily. Tours include an audiovisual presentation and tour of the Center. Reservations are requested for large tour groups. Speakers are also available for group meetings. We also encourage suggestions for improvements to the PSVTS Users Manual or to VTS operating procedures. Send suggestions, comments or requests for copies of the Users Manual to:

Commanding Officer	Phone:	(206) 217-6050 Vessel Traffic Center
Puget Sound Vessel Traffic Service		(206) 217-6040 Administration
1519 Alaskan Way South	Fax:	(206) 217-6058
Seattle WA 98134-1192	Email:	vtspsops@pacnorwest.uscg.mil

CANADA/U.S COOPERATIVE VESSEL TRAFFIC SERVICES (CVTS):

Since 1979, the U.S. Coast Guard has worked cooperatively with the Canadian Coast Guard in managing vessel traffic in adjacent waters. Through the Cooperative Vessel Traffic Service (CVTS), two Canadian Vessel Traffic Centers work hand in hand with Puget Sound Vessel Traffic Service. The area west of the Strait of Juan de Fuca is managed by Tofino Vessel Traffic Service (VHF-FM CH 74). Race Rock, through Haro Strait, to Vancouver, B.C. is managed by Vancouver Vessel Traffic Service (VHF-FM CH 11). The three Vessel Traffic Centers communicate via a computer link and dedicated telephone lines to advise each other of vessels passing between their respective zones. The CVTS has two components, the Advance Report and actual Vessel Traffic Services.

Advance Notice of Arrival Reporting Requirements for all United States Ports

On October 4, 2001 the 33 Code of Federal Regulations Part 160 Advance Notice of Arrival reporting requirements were changed to 96 hours for vessels bound to a United States port. Also, vessels previously exempted from Advance Notice of Arrival Reporting requirements due to participation in the Automated M utual Assistance Vessel Rescue System (AMVER) are now required to provide an Advance Notice of Arrival in accordance with this rule.

The new Advance Notice rule was printed in the Federal Register: October 4, 2001 (Volume 66, Number 193) Page 50565-50574 available at http://www.nara.gov/fedreg/ or the Marine Safety Office Puget Sound web page at http://www.uscg.mil/d13/units/msopuget/msops.html.

Advance Notice of Arrivals can be sent to the National Vessel Movement Center 24 hours per day, 7 days a week by phone: (800) 708 -9823 or (304) 264-2502, fax: (800) 547-8724 or (304) 264-2684, or email: sans@nvmc.uscg.gov. More information and forms are available on the National Vessel Movement Center (NVMC) web site: http://www.nvmc.uscg.gov/.

Vessel Traffic Services:

When inbound and crossing longitude 127 W, latitude 48 N, or within 50 NM of Vancouver Island, all vessels 20 meters or greater, including tug and tows, contact "Tofino Traffic" on VHF Channel 74. Once under Tofino Traffic management, vessels will receive instructions on when to switch to new frequencies at Seattle Traffic (Channel 5A) and Vancouver Traffic (Channel 11) zone boundaries. Participation with Tofino, Seattle, and Vancouver Traffic is mandatory within Canadian and U.S. territorial waters. The services, however, are available considerably further offshore, typically about 60 nautical miles. Though participation seaward of Canadian and U.S. territorial waters is voluntary, vessels are strongly encouraged to participate to receive the full benefit of the available Vessel Traffic Services. These benefits include traffic updates, warnings of vessel congestion or other hazardous conditions, and many other forms of transit assistance. Our goal is to make your visit as safe and convenient as possible.

English Language:

All communications with Tofino, Seattle, or Vancouver Traffic must be made in clear, unbroken English. At least one person capable of conducting two-way radio communication using the English language must be present on the bridge at all times within the CVTS area. When language problems arise, communications may be preceded by the following Message Markers:

1. Question: request for information.
2. Answer: the reply to a previous question.
3. Request: a request for action from others with respect to the ship.
4. Information: observed facts.
5. Intention: notice of immediate planned navigational actions.
6. Warning: information about dangers.
7. Advice: a recommendation to correct a hazardous condition.
8. Instruction: a lawful order.
9. Clearance: an authorization to proceed subject to conditions.

CVTS General Information:

Details and regulations concerning the Canadian/United States Cooperative Vessel Traffic Services are contained in Canadian Notice to Mariners, the U.S. Code of Federal Regulations, and in many nautical publications. For more information about the CVTS contact:

Canada		**United States**	
Superintendent, Canadian Coast Guard, Marine Communications And Traffic Services	Suite 350 555 West Hastings Street Vancouver, B.C. V6B 5G3 Canada Telephone: (604) 775-8853 Facsimile: (604) 775-8827	Commander (m), United States Coast Guard Thirteenth Coast Guard District	Jackson Federal Building 915 Second Avenue Seattle, WA 98174-1067 U.S.A. Telephone: (206) 220-7210 Facsimile: (206) 220-7225

CHAPTER IX

LAW ENFORCEMENT

NAVIGATION RULES

The Navigation Rules establish actions to be taken by vessels to avoid collision. The vessel operator is responsible for knowing and following applicable navigation rules. Annex V (Inland) of the Navigation Rules requires operators of each self-propelled vessel 12 meters (39.4 feet) or more in length to carry and maintain a copy of the Inland Navigation Rules. Commercially produced navigation rules publications or copies of Title 33 Code of Federal Regulations, Parts 80 through 90, are acceptable. The vessel operator is responsible for knowing and following the applicable navigational rules. Copies may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 or call (202) 783-3238.

International Rules apply outside established lines of demarcation and Inland Rules apply inside the lines. Demarcation lines are printed on most navigational charts and are published in the Navigation Rules.

COAST GUARD LAW ENFORCEMENT

One of the Coast Guard's primary missions is maritime law enforcement on the high seas and waters subject to Federal statute. These statutes cover drug smuggling, illegal immigration, safety, water pollution and fisheries. To enforce these laws, the Coast Guard is empowered to board and inspect any and all vessels. These boardings usually are conducted while vessels are underway, which has proven to be the most effective method to insure compliance with Federal regulations.

BOARDINGS BY THE COAST GUARD

Boardings are not necessarily based on suspicion that a violation has occurred or exists on board. Their purpose is to prevent and suppress violations and has been upheld by the courts. All Coast Guard officers and petty officers are Federal law enforcement officers and may board any U.S. vessel anywhere and at anytime, so do not be alarmed if boarded at night or unexpectedly. The boarding team is usually armed.

WHAT TO EXPECT DURING A BOARDING

There are standard procedures the Coast Guard followings before boarding. Remember, Coast Guard personnel will always properly identify themselves, will always be in uniform, coveralls, or survival suit displaying Coast Guard insignia, and will always be in a marked Coast Guard or Navy vessel flying the Coast Guard Ensign. Once aboard the vessel, examination is usually limited to determining the vessel's status and checking for compliance with Federal regulations. If during inspection, a reasonable suspicion develops that the vessel has been engaged in criminal activity, the boarding officer may investigate further. If the vessel is subject to a customs inspection, the boarding officer may conduct a thorough search of the entire vessel. Cooperation will make the entire process move smoothly and quickly.

COMPLAINTS CONCERNING BOARDINGS OR BOARDING OFFICERS

When conducting boardings or other law enforcement activities, the Coast Guard strives to maintain a proper balance between the apparent intrusion into the normal activities of law-abiding individuals and their mission of Federal law enforcement. Occasionally, the Coast Guard will receive complaints that a boarding was conducted improperly. These complaints usually involve a very small percentage of the total number of boardings conducted each year. Nevertheless, any complaint concerning boardings or boarding officers will be investigated. Complaints should normally be directed to the Thirteenth Coast Guard District, Chief, Operations Division (o), 915 Second Ave, Seattle, WA 98174-1067 or call (206) 220-7257.

OPERATING A VESSEL WHILE INTOXICATED

New Federal regulations went into effect in 1988 that provide for civil and/or criminal penalty for operating a vessel while intoxicated. These regulations pertain to both recreational and commercial vessels; however, the provisions are slightly different for the two categories.

1. Recreational vessels: As applied to recreational vessels "operator" is defined as the individual who has an essential role in the operation of a vessel underway, including but not limited to navigation of the vessel or control of the vessel's propulsion system. An individual is considered intoxicated when:
   a. The individual has an alcohol concentration of .10% by weight or more in their blood.
   b. The effect of the intoxicant consumed by the individual on the person's manner, disposition, speech, muscular movement, general appearance or behavior is apparent by observation.
   c. If the operator is intoxicated, the voyage may be terminated for unsafe condition and the operator is subject to civil penalties up to $1,000 or criminal penalties up to $5,000 and/or one year in prison.

2. Commercial vessels: The principle difference in the enforcement of these regulations for operators of commercial vessels are:
   a. An individual is considered intoxicated if the blood alcohol concentration is .04% by weight or more in the blood.
   b. All crewmembers, including a watchstander not a regular member of the crew, are considered to be operating a vessel.
   c. If the operator is intoxicated, the voyage may be terminated for unsafe condition and the operator is subject to civil penalties up to $1,000 or criminal penalties up to $5,000 and/or one year in prison.

LAW ENFORCEMENT FOR RECREATIONAL BOATS

U.S. Coast Guard vessels are identified by a distinctive stripe, the words COAST GUARD on the side of the vessel, the Coast Guard ensign, and uniformed personnel. Coast Guard law enforcement personnel may also be found aboard other vessels displaying the Coast Guard ensign and will normally carry sidearms or other firearms in the performance of their duties. A vessel underway, upon being hailed by a Coast Guard vessel, is required to stop immediately and lay to or maneuver in such a way as to permit the boarding officer and team to come aboard. A civil penalty up to $500 may be imposed by the Coast Guard for failure to :

1. Comply with numbering requirements.
2. Comply with equipment requirements.
3. Report a boating accident.
4. Comply with other Federal regulations.

A civil penalty of up to $1,000; imprisonment of not more than 1 year; or both; can result for the criminal offense of NEGLIGENT OR GROSSLY NEGLIGENT OPERATION of a vessel. The following are some examples of actions that may constitute negligent or grossly negligent operation under certain circumstances:

1. Operating in swimming areas.
2. Operating while under the influence of alcohol or drugs.
3. Excessive speed in the vicinity of other vessels or a designated channel.
4. Hazardous water skiing practices.
5. Operating in clearly dangerous area.
6. Bow, seatback, gunwale, or transom riding.

A civil penalty of up to $5,000 can result for failure to comply with the Inland Rules of the Road (Inland Navigation Rules Act of 1980).

TERMINATION OF USE

A Coast Guard boarding officer who observes a recreational boat operating in an UNSAFE CONDITION, specifically defined by law or regulation, and determines that an ESPECIALLY HAZARDOUS CONDITION exists, may direct the operator to take immediate steps to correct the condition, including returning to mooring. The specific unsafe conditions for which termination may be imposed are:

1. Insufficient number of personal flotation devices (PFDs).
2. Insufficient firefighting devices.
3. Overloaded conditions.
4. Improper navigational light display.
5. Fuel leakage.
6. Fuel in bilges.
7. Improper ventilation.
8. Improper flame arrester (backfire flame control).
9. Manifestly unsafe voyage.
10. Operating a vessel while intoxicated.
11. Operating in regulated boating areas during predetermined adverse conditions (13th District only).

An operator who refuses to comply with the order to terminate unsafe use of the boat may be cited for failure to comply with the directions of a Coast Guard boarding officer, as well as for the specific statutory or regulatory violation or provisions which were the basis for the termination order.

WATER POLLUTION PREVENTION

The Refuse Act of 1899 and the Act to Prevent Pollution from Ships (33 USC: 1901-1911) prohibit the throwing, discharge, or depositing of any refuse matter of any kind (including trash, garbage, oil, and other liquid pollutants) into the waters of the U.S. to a distance of three mile from the coastline. The Federal Water Pollution Control Act prohibits the discharge of oil or hazardous substances in quantities which may be harmful into U.S. navigable waters, the contiguous zone, and waters within 200 miles in some cases. You must immediately notify the Coast Guard if your vessel or facility discharges oil or hazardous substances into the water. Call toll-free to the National Pollution Response Center at 1-800-424-8802. The following Coast Guard regulations concern the prevention of water pollution.

1. A person in charge of a vessel or an onshore or offshore facility is required to immediately report by telephone, radio telecommunication, or other similar means, any discharge of oil or other hazardous substance. Penalty for discharging harmful oil is a maximum of $5,000 assessed against the person-in-charge of the source. Failure to notify the Coast Guard is a criminal penalty with a maximum $10,000 charge and/or one year imprisonment. The owner/operator of the vessel or shore facility is liable for removal costs. Limits of liability are determined by vessel tonnage.

2. A vessel, except a vessel of less than 26 feet in length, must have a placard of at least 5 by 8 inches, made of durable material, fixed in a conspicuous place in each machinery space, or at the bilge and ballast pump control station, stating the following:

   DISCHARGE OF OIL PROHIBITED
   THE FEDERAL WATER POLLUTION CONTROL ACT PROHIBITS THE DISCHARGE OF OIL OR OILY WASTE INTO OR UPON THE NAVIGABLE WATERS OF THE UNITED STATES OR THE WATERS OF THE CONTIGUOUS ZONE IF SUCH DISCHARGE CAUSES A FILM OR SHEEN UPON OR DISCOLORATION OF THE SURFACE OF THE WATER OR CAUSES A SLUDGE OR EMULSION BENEATH THE SURFACE OF THE WATER. VIOLATORS ARE SUBJECT TO A PENALTY OF $5,000.

3. Certified marine sanitation devices (MSDs) are required on all vessels with installed toilet facilities. Direct discharge toilets are illegal unless the vessel is operating under a waiver granted by the Commandant (G-MOC), U.S. Coast Guard, Washington, DC 20593-0001. This includes any equipment for installation onboard a vessel which is designed to receive, retain, treat, or discharge sewage and any process which treats such sewage. It does not include "portable toilets" which can be carried on and off the vessel. The discharge of untreated or inadequately treated sewage into U.S. waters is prohibited for all vessels, including foreign, federal, and state-owned vessels operating in U.S. waters. Noncompliance will result in civil penalties of up to $2,000. Manufacturers that sell MSDs or manufacturers of vessels with MSDs aboard that do not comply with these regulations are subject to fines of up to $5,000. More specific information concerning water pollution is contained in Title 33 Code of Federal Regulations, Parts 153, 155, and 159. All boaters must help to ensure that others obey the law and are encouraged to report polluting discharges which you observe to the nearest Coast Guard Office or call toll-free 1-800-424-8802. Please report the following information: 1) location 2) source 3) size 4) color 5) substance and 6) time observed. **DO NOT** attempt to take samples of any chemical discharge. If uncertain as to the identity of any discharge, avoid flame, physical contact, or inhalation of fumes.

OCEAN DUMPING

The Marine Protection, Research, and Sanctuaries Act of 1972 (40 CFR Subchapter H) regulates the dumping of all material into ocean waters. The Army Corps of Engineers issues permits for the disposal of dredged spoils; the Environmental Protection Agency is authorized to issue permits for all other dumping activities. The Act provides civil penalties of up to $50,000 and criminal penalties of up to $50,000 and/or one year imprisonment, for persons violating the provisions of the Act.

DISPOSAL OF PLASTICS AND OTHER GARBAGE IN THE WATERS OF THE UNITES STATES

New Federal regulations controlling disposal of garbage from vessels prohibit the discharge of plastic garbage anywhere in the marine environment. Plastic includes, but is not limited to: Plastic bags, Styrofoam, cups and lids, six pack holders, bottles, caps, buckets, shoes, milk jugs, egg cartons, stirrers, straws, synthetic fishing nets, ropes, lines, and "bio- or photo-degradable" plastics. These regulations also restrict the disposal of other types of garbage within specified distances from shore. Definitions of some types of waste are:

GARBAGE means all kinds of food, cargo, and maintenance waste, ashes or clinkers, and domestic waste (generated in living spaces aboard the vessel -- what we normally call trash). "Garbage" does not include fresh fish or fish parts, dishwater, and graywater.

DISHWATER means the liquid residue from the manual or automatic washing of dishes and cooking utensils which have been precleaned to the extent that any food particles adhering to them would not normally interfere with the operation of automatic dishwashers.

DUNNAGE means cargo associated waste.

GRAYWATER means drainage from a dishwasher, shower, laundry, bath, or washbowl and does not include drainage from toilets, urinals, hospitals, and cargo spaces. All U.S. vessels, wherever they operate, and foreign vessels operating in U.S. waters out to and including the Exclusive Economic Zone (200 miles) must comply with Annex V of MARPOL 73/78.

VESSELS (33 CFR 151.57): United States vessels of 26 feet or longer must display in a prominent location, a durable placard at least 4 by 9 inches notifying the crew and passengers of the discharge restrictions. United States oceangoing vessels of 40 feet or longer, which are engaged in commerce or are equipped with a galley and berthing must have a written Waste Management Plan describing the procedures for collecting, processing, storing, and discharging garbage; and designate the person who is in charge of carrying out the plan. (Definition of oceangoing vessel is described in 33 CFR 151.05)

PREVENTION OF OIL POLLUTION

FACILITIES (33 CFR 154): Any facility which transfers oil in bulk to or from a vessel with a capacity of 250 or more barrels of oil must comply with these regulations. Operators of these facilities must submit letters of intent and operations manuals. Equipment requirements and transfer procedures are set forth in 33 CFR 154 .

VESSELS (33 CFR 155): This part deals with vessel design and operations. Equipment requirements for discharge containment slop retention, and ballast discharge means to discharge oily bilge slops to a shoreside reception facility. Also, no person may drain oil sumps, filters, strainers, or purifiers into vessel bilges. Personnel qualifications and oil transfer procedures are also specified. One other part of this section requires all U.S. vessels of 26 feet or more to display a placard (see Chapter V).

TRANSFER OPERATIONS (33 CFR 156): This part deals with oil transfer operations, setting forth requirements for oil transfer, inspection procedures, equipment tests, and supervisory responsibilities.

TANK VESSELS (33 CFR 157): These regulations govern the design and operation of seagoing U.S. tank ships and barges of 150 gross tons and over that carry oil in the U.S. domestic trade. These regulations should reduce pollution from tank cleaning and deballasting operations. Copies of these regulations may be obtained from the nearest Government Printing Office or marine supply store. For any questions concerning these regulations contact your nearest Coast Guard Captain of the Port.

GARBAGE DISCHARGE REGULATIONS - PLACARDS

As of 31 July 1990, certain U.S. vessels are required to post garbage discharge placards for their crew and passengers. Certain other U.S. vessels are required to develop a waste management plan and post garbage discharge placards for their crew and passengers. Placards are required for all manned U.S. vessels 26 feet or more in length. One or more placards must be placed in prominent locations and in sufficient numbers so they can be read by the crew and passengers. The placard locations must be readily accessible to the intended reader. Locations may include embarkation points, food service facilities, garbage handling spaces, and common spaces on deck. Coast Guard boarding officers must be satisfied that placards are located in such a manner, and in sufficient quantity, that every crew member and passenger aboard the vessel would have access to a placard. Boarding officers will have an ample supply of placards for public distribution during boardings. Individual mariners and small groups requesting placards may contact the Center for Marine Conservation, 312 Sutter Street, Suite 606, San Francisco, CA 94108, or call (415) 956-7441.

A waste management plan and placard are required for all manned, oceangoing U.S. vessels greater than 40 feet in length that are engaged in commerce, or equipped with a galley and berthing. The waste management plan must be developed in writing and meet the garbage discharge requirements of Annex V to MARPOL 73/78, Title 33 Code of Federal Regulations subparts 151.51 through 151.77. Each person handling garbage on board the vessel must follow the provisions of the plan. The plan must describe procedures for collecting, processing, storing, and discharging garbage. The plan must designate the person who is in charge of carrying out the plan. The following is an example of a waste management plan for a vessel operating inside of three nautical miles from shore:

"Solid waste management procedures. All garbage generated on the vessel is put in a garbage bag and disposed of in a trash container located at the port of call (or given to a tender vessel to take to shore for disposal). All crew members are to be oriented to the requirements of MARPOL Annex V by the captain. All new crewmembers will be specifically shown the garbage discharge placard and told to keep all refuse stowed on board. Passenger orientation to the vessel should include being shown the location of the trash receptacle, mention of refuse discharge regulations, and the name of the person charged with the responsibility for carrying out the plan." Vessels operating beyond three nautical miles from shore must develop a plan that meets the requirements of MARPOL 73/78 Annex V, Garbage Discharge Restrictions.

NAVIGATION LIGHTS AND DAYSHAPES ON FISHING VESSELS

Vessels engaged in gillnetting are frequently observed not displaying dayshapes and proper navigation lights. This constitutes a violation of U.S. Navigation Regulations and can lead to vessel accidents. In addition to the suffering of injuries or loss of life and property that may be a result of this problem, vessels not showing dayshapes or proper navigation lights increase their liability for payment of damages which result from collisions with other vessels and decrease their chances of recovering damages to nets and other equipment.

On December 24, 1981 the International Rules for Preventing Collisions at Sea, 1972 (72 COREGS) replaced the old Inland Rules as the applicable "Rules of the Road" on Lake Washington, Puget Sound, Georgia Strait, Strait of Juan de Fuca and all adjacent waters. In the 72 COLREGS, Rule 26 requires the following navigation lights and dayshapes for "vessels engaged in fishing, other than trawling":

1. Two all-around lights in a vertical line, the upper being red and the lower white, or a shape consisting of two cones with apexes together in a vertical line one above the other; a vessel of less than 20 meters in length may instead of this shape exhibit a basket.
2. When there is outlying gear extending more than 150 meters horizontally from the vessel, an all-around white light or cone apex upwards in the direction of the gear.
3. When making way through the water, in addition to the lights prescribed above, sidelights and a sternlight.

The lighting and dayshape requirements described above apply only to vessels engaged in fishing other than trawling. The 72 COLREGS define a "vessel engaged in fishing" as "any vessel fishing with nets, line trawls or other fishing apparatus which restricts maneuverability". This term does not include fishing vessels which do not have gear over the side. It does not include fishing vessels which do have gear over the side but whose maneuverability is not restricted by that fishing gear. In these latter two situations, the fishing vessels should display the lights prescribed for a power driven vessel underway. In addition, problems have been noted with the coloration of certain navigation lights. The red lenses used in lights on certain vessels have turned amber through age. These lenses should be checked. If they have turned amber, they should be replaced with a red lens to be in compliance with the 72 COLREGS.

In the Puget Sound area, refer questions on navigation light requirements to Coast Guard Marine Safety Office, 1519 Alaskan Way South, Seattle, WA 98134, or call (206) 217-6200. In the Columbia River area and the Washington and Oregon coast area, refer these questions to Coast Guard Marine Safety Office, 6767 North Basin, Portland, OR 97217, or call (503) 240-9301.

FISHING VESSEL MODIFICATIONS

In the past, fishing vessels boarded in Dutch Harbor, Alaska, were found to be modified or altered. Some of these fishing vessels had made additions in space, others were using unauthorized compartments for storage, and others had sealed up tonnage openings. These alterations have placed the vessels in violation of several Federal requirements. Anytime a vessel is modified by altering the internal compartments or by adding area to the superstructure, the overall tonnage of the vessel changes. In these cases, (1) the vessel's Certificate of Documentation becomes invalid and must be surrendered (46 CFR 67.25-7), (2) the vessel needs to be readmeasured to determine its new tonnage, and (3) the new tonnage requires application for a new Certificate of Documentation. Violation of these Federal Regulations may result in the assessment of civil penalties against the vessel's owners/operators as well as administrative action (i.e.: suspension or revocation of Coast Guard issued licenses) against masters or other licensed personnel. Penalties for vessel documentation regulations can be up to $500 per day and the vessel could be liable to seizure by the U.S. Government. Penalties for admeasurement regulations can be up to $20,000 per day. The American Bureau of Shipping currently handles vessel admeasurement.

CREW CITIZENSHIP REQUIREMENTS FOR FISHING INDUSTRY VESSELS

Federal Regulations require that on U.S. fishing, fish processing, and fish tender vessels engaged in fisheries in the navigable waters of the U.S. OR THE EXCLUSIVE ECONOMIC ZONE (EEZ), AT LEAST 75 PERCENT OF THE UNLICENSED SEAMEN BE EITHER CITIZENS OF THE U.S. or aliens lawfully admitted to the U.S. for permanent residence. The remaining 25 percent of the unlicensed seamen may be other aliens who are allowed to be employed under Immigration and Naturalization Service (INS) rules. Any unlicensed person aboard a vessel who provides any service toward the mission of the vessel is considered an unlicensed seaman. This includes any foreign national that is aboard as a technician or advisor.

EPIRB REQUIREMENTS FOR UNINSPECTED FISHERY VESSELS

After 17 May 1990, the owner of an uninspected vessel that is a fishing vessel, fish processing vessel, or a fish tender vessel shall ensure that the vessel does not operate outside three (3) nautical miles from the coast unless it has a properly registered FCC Type, accepted Category 1, float-free, automatically activated, 406 MHz Emergency Position Indicating Radio Beacon (EPIRB) on board. For more information on EPIRBs see Chapter V.

REPORTS OF FOREIGN FISHING VESSELS VIOLATING LAWS OF THE U.S.

All foreign vessels are prohibited inside 12 miles of the U.S. coastline except those foreign fishing vessels permitted for and engaged in support activities involving Joint Venture fishing. Foreign fishing vessels are also prohibited from fishing or engaging in fishing support activities within the 3 to 200 mile fishery conservation zone unless they have a permit for such activities. "Activities in support" include repair of a fishing vessel and transfer of personnel, supplies, fuel, water, fishing gear or machinery or fish processing equipment. It is also a violation of U.S. law for a foreign vessel to take and retain any continental shelf fishery resources from the U.S. continental shelf (generally speaking the edge of the shelf is 109 fathoms). "Continental shelf fishery resources" include coral, crab, abalone, conch, clam, quahog, sponge, and lobster. It is requested that apparent violations of U.S. law and routine sightings of foreign fishing vessels be reported to the Coast Guard. Immediate reports are particularly desired, but later reports also have value. Reports should include the activity observed, the location, and as much identifying information (name, number, home port, flag, color, size, shape, etc.) about the foreign vessel as possible.

TERMINATION OF UNINSPECTED FISHING VESSEL VOYAGES

A Coast Guard Boarding Officer may direct the individual in charge of an uninspected fishing vessel, fish processing vessel or fish tender vessel to immediately take reasonable steps necessary for the safety of individuals on board the vessel if the official observes the vessel being operated in an unsafe manner which creates an especially hazardous condition. This may include ordering the individual in charge to return the vessel to a mooring and to remain there until the situation creating the hazard is corrected or ended. A violation could subject the vessel owner/operator to a civil penalty of no more than $5,000. A willful violation could result in a criminal fine of no more than $5,000 and 1 year imprisonment. Termination is suspended when the conditions which created the especially hazardous condition have been corrected. It remains the operator's responsibility to ensure the vessel is in compliance with all applicable federal regulations before getting underway again.

REVOCATION OR SUSPENSION OF LICENSES OR CERTIFICATIONS

A license, certificate of registry, or merchant mariner's document issued by the Coast Guard may be suspended or revoked if, when acting under the authority of the license, certificate, or document; the holder is found to be guilty of violations of Federal laws or regulations governing navigation or inspection of vessels, or has committed an act of incompetence, misconduct, or negligence. In those cases for which a civil penalty or a criminal penalty is imposed, action against a license, certificate, or document will not usually be pursued; however, there are provisions for taking both actions if deemed appropriate.

13TH COAST GUARD DISTRICT CAPTAIN OF THE PORT AND MARINE INSPECTION OFFICE ZONES

The Thirteenth Coast Guard District is divided into two Captain of the Port and two Marine Inspection Office zones for the purpose of assigning geographic areas of responsibility. The exact coordinates delineating the geographical boundaries of the zones are contained in 33 Code of Federal Regulations part 3.65-10 for the Captain of the Port, Seattle and Marine Inspection Office Seattle Zones and in 33 Code of Federal Regulations part 3.65-15 for the Captain of the Port, Portland and Marine Inspection Office Portland Zones. For more information concerning the Captains of the Port or the Marine Inspection Offices call or write:

Captain of the Port, Portland
6776 North Basin
Portland, OR 97217-3992
(503) 240-9314

Captain of the Port, Puget Sound
1519 Alaskan Way South
Seattle, WA 98134-1192
(206) 217-6232

CHAPTER X

CAUTIONARY SITUATIONS

FIRING DANGER AREAS

Firing and bombing practice exercises take place in numerous areas established for those purposes along the coast and in some areas of the Strait of Juan de Fuca and Puget Sound. Responsibility to avoid accidents rests with the authorities using the areas. National Ocean Service charts show firing and bombing practice areas in United States waters. Similarly, as new editions of DMAHTC Charts are published, firing and bombing practice area limits will be shown when they are extending from or adjacent to the coastline. Firing Danger Areas in the open sea normally will not be shown. Any aid to navigation that may be established to mark a danger area; and/or any target, fixed or floating, that may constitute a danger to navigation, will be shown on the appropriate charts. Warning signals, usually consisting of red flags or red lights, are customarily displayed before and during the practice, but the absence of such warnings cannot be accepted as evidence that a practice area does not exist or is not in use. Vessels should be on the lookout for local warnings and signals, and should whenever possible, avoid passing through an area in which practice is in progress, but if compelled to do so should endeavor to clear it at the earliest possible moment.

U.S. NAVY OPERATING AREAS

The U.S. Navy advises the following Navy Operating Areas are in use on a continuing basis by Navy ships and aircraft. Area designations, charts showing them, type of exercises authorized, and times of use, are indicated as follows:

1. R-6701 (Navy 7). Charts 18400, 18440, 18464, 18423, and 18471. Ship tactical exercises, nonexplosive ordnance, small arms fire, aerial training rockets, miniature bombs, practice mines; sunrise to sunset for aircraft, continuously for surface exercises.
2. R-6707 (Navy 5). Chart 18500. Aerial rockets, bombs, strafing (live ordnance); sunrise to sunset.
3. R-6713 (Navy 3). Charts 18400, 18421, 18465, 18440, 18441, 18423, and 18471. Ship tactical exercises, nonexplosive ordnance, small arms fire, air to surface gunnery, night illumination, practice bombs, mines, torpedoes, rockets.
4. W-237 (Navy 6 and Navy 8). Charts 18003, 18007, 18500, 18480, 18485, and 18400. Surface tactical exercises and gunnery, antiaircraft and missile firing, undersea warfare and combined exercises, air to air gunnery, rockets, and missiles; aerial bombing, air to surface firing; live ordnance authorized; continuous.
5. W-460 A & B. Charts 18003, 18007, and 18500. Air to air gunnery, rockets, missiles; air to surface firing, bombing, missiles, conventional ordnance, photoflash cartridges. Area W-460B is also designated as an ASW training area; sonar buoys, practice depth charges and smoke markers.

Because of the frequency and variety of exercises conducted in the above areas and the difficulty in scheduling them far in advance due to the uncertainties of weather, it is not possible to issue individual Notice to Mariners each time an exercise is scheduled. Mariners are therefore warned of the possible danger when in the above areas. For regulations governing Restricted Areas, consult U.S. Coast Pilot 7, Pacific Coast.

STRAIT OF JUAN DE FUCA NAVY CALIBRATION BUOY

U.S. Navy advises that Naval vessels conducting equipment calibrations will be utilizing, on a continuing basis, the Strait of Juan de Fuca Calibration Lighted Bell Buoy (LLNR 16275), located in approximate position 48°14'15"N/123°21'45"W, at a range of six miles, bearing 015° True from Ediz Hook, Port Angeles, WA. In connection with these tests, surface vessels or submerged submarines may be maneuvering in clockwise circles in the vicinity of the buoy for several hours or days. When the operations are in progress, a single group of fixed amber lights displayed at the eastern end of Ediz Hook will indicate a surface vessel is maneuvering around the buoy, and two groups of fixed amber lights will indicate submarine operations are being conducted about one mile south of the buoy. Light groups in these configurations will be visible both north and south of Ediz Hook.Charts 18400, 18440, 18465, and 18471.

SUBMARINE OPERATIONS

Boundary limits and designations of submarine operating areas are shown on charts in magenta or purple lines. As submarines may be operating in these areas, vessels should proceed with caution. During torpedo practice firing, all vessels are cautioned to keep well clear of naval target vessels flying a large red flag. In the past a number of potentially dangerous situations have occurred when ships have entered fleet operating areas in which underwater (and air) operations were being conducted. Mariners are urged to navigate with caution when transiting an operating area and to listen to Broadcast Notices to Mariners as described in Chapter IV.

SUBMARINE EMERGENCY IDENTIFICATION SIGNALS

U.S. submarines are equipped with signal ejectors which may be used to launch identification signals, including emergency signals. Two general types of signals may be used: smoke floats and flares or stars. The smoke floats, which burn on the surface, produce a dense, colored smoke for a period of fifteen to forty-five seconds. The flares or stars are propelled to a height of three hundred to four hundred feet from which they descend by small parachute. The flares or stars burn for about twenty-five seconds. The color of the smoke or flare/star has the following meaning.

1. GREEN OR BLACK: Used under training exercise conditions only to indicate that a torpedo has been fired or that the firing of a torpedo has been simulated.

2. YELLOW: Indicates that submarine is about to come to periscope depth from below periscope depth. Vessels should not stop propellers. This is important to insure that the submarine knows where you are located.
3. RED: Indicates an emergency condition within the submarine and that it will surface immediately, if possible.

Look for submarine marker buoys consisting of 2 spheres 3 feet in diameter painted international orange with connecting structure. The buoy is a messenger buoy with a wire cable to the submarine. A submarine on the bottom in distress and unable to surface will, if possible, release this buoy. The submarine may employ any or all of the following additional means to attract attention and indicate their position while submerged:

1. Release of dye marker.
2. Release of air bubble.
3. Ejection of oil.
4. Pounding of the hull.

If any of these attempts to attract attention are noted, advise U.S. Naval authorities immediately.

SIGNALS FOR COAST GUARD VESSELS WHILE HANDLING OR SERVICING AIDS TO NAVIGATION

1. Day: Three dayshapes not less than 6 feet apart and each not less than 2 feet in diameter, of which the highest and lowest shall be ball-shaped and black in color, and the middle one diamond shaped and black.
2. Night: Three lights in a vertical line not less than 6 feet apart, the highest and lowest being red and the middle one being white in color.

Vessels, with or without tows, passing Coast Guard vessels displaying this signal, shall reduce their speed sufficiently to insure the safety of both vessels, and when passing within 200 feet of the Coast Guard vessel displaying this signal, their speed shall not exceed 5 miles per hour.

GEOPHYSICAL SURVEYING VESSELS

In the last few years operations conducted by geophysical survey vessels have increased off the Oregon and Washington seacoasts. Survey vessels can pose a hazard to navigation when towing a submerged seismic cable. The cable is generally towed at a depth of 15 to 40 feet below the surface, with a length up to two miles. The end of the cable, if depth and length warrant, is marked by a "tail buoy" displaying either a fixed or flashing white light and often equipped with a radar reflector. Survey vessels towing a submerged cable are required to exhibit lights and dayshapes as prescribed in Rules 24 (Towing and Pushing) and 27 (Restricted Maneuverability) of the Inland and International Navigation Rules as appropriate. Seismic cables can be slacked to allow increased clearance to another vessel crossing over the cable. However, proposal and agreement for such a maneuver should be first made between the two vessels via radiotelephone.

CAUTION REGARDING APPROACH OF VESSELS TOWARD NAVAL FORMATIONS AND CONVOYS

A formation of warships or convoy is more difficult to maneuver than a single ship. All vessels are cautioned to employ the customary manners of good seamanship and where there is ample sea room, adopt early measures to keep out of the way of a formation of warships or convoy.

SEAPLANE OPERATIONS

Mariners are cautioned that seaplane operations are conducted throughout the Puget Sound area but are a particular hazard on Lake Union, Lake Washington, and the San Juan Islands. Mariners are urged to maintain a sharp lookout for seaplanes taking off and landing in the areas traditionally used by them, since they require significant surface area and have difficulty in maneuvering. Once on the water (displacement mode) they are required to conduct themselves in accordance with the Navigation Rules - Inland and International, like any other vessel.

EXPLOSIVE ORDNANCE

The continental shelf of the United States contains many forms of unexploded ordnance (military weapons), the locations of which are not known. The types most likely to be encountered are underwater ordnance such as torpedoes, mines, depth charges, and aerial bombs, but other ordnance items may be found. Any metallic object having fins, vanes, propellers, horns, or possibly plates screwed or bolted to an external surface should be regarded as dangerous. This warning is published for all shipmasters, trawlers, fishermen, or persons conducting operations on or near the ocean bottom, and provides instructions on the action to be taken when ordinance items or suspicious objects are encountered:

1. OBJECTS SNAGGED OR NETTED: Any object which cannot be immediately identified as a non-explosive (inert) item MUST BE TREATED AS AN EXPLOSIVE ITEM. If there is any doubt about its identity, TREAT IT AS EXPLOSIVE. Nonexplosive naval ordnance items such as practice torpedoes and practice mines will normally be painted bright orange,

for ready identification. Any object which is not painted bright orange may be dangerous and possibly can explode if brought on board or bumped in any way. If an object is brought to the surface of the water and it cannot be immediately identified as an inert item, DO NOT ATTEMPT TO BRING IT ON BOARD OR ALONGSIDE. If possible, release the object immediately and radio the nearest Navy or Coast Guard activity, giving the position and description of the object. If the object cannot be released, or freed by cutting the net or line, the following actions are advised:

a. Stream the object as far aft as possible.
b. Notify the nearest Coast Guard or Navy activity and stand by for instructions or help.
c. Position the crew at the forward end of the vessel keeping the deckhouse between them and the object astern.
d. Maintain steerageway as necessary to stay in the area until help or instructions arrive.

2. OBJECTS BROUGHT ON BOARD: If a suspected explosive object is not detected until the trawl of net contents have been discharged on board the vessel, take the following actions:

a. Avoid any bump or shock to the object.
b. Secure it in place.
c. Keep it covered up and wetted down.
d. Radio the nearest Coast Guard or Navy activity and stand by for instructions.

3. FLOATING OBJECTS: If a floating object cannot be readily identified as nonexplosive, IT MUST BE CONSIDERED TO BE EXPLOSIVE. DO NOT APPROACH OR ATTEMPT TO RECOVER OR BRING IT ON BOARD. Report the location immediately to the nearest Coast Guard or Navy activity and warn all other ships or craft in the vicinity. Try to keep the object in sight until instructions are received.

4. REPORTING OF SUSPICIOUS OBJECTS RESEMBLING MINES: Ships frequently report objects resembling mines, but often give insufficient information to properly evaluate the reports. As a result, needless time and expense is incurred only to find that they are not mines but other floating objects. HOWEVER, VESSELS SHOULD NOT ATTEMPT TO RECOVER OBJECTS RESEMBLING MINES OR PASS CLOSE ABOARD FOR POSITIVE IDENTIFICATION, KEEP WELL CLEAR. Since mines are a danger to life and property at sea, masters of ships sighting unidentified or suspicious objects are requested to furnish the following information to the nearest Coast Guard or Navy radio station or activity:

a. Position of object, and how closely it was approached.
b. Size, shape, condition of painting, and the presence of marine growth.
c. Whether or not horns or rings are attached.
d. Whether or not definite identification is possible.

DANGER FROM UNLABELED DRUMS

With the many exotic chemicals being transported in drums as deck cargo, reports are frequently received of loss overboard of these potentially dangerous containers. Even empty drums may contain residues which are extremely hazardous to touch or smell, and some vapors may be highly explosive. When coming upon derelict drums, whether afloat or from the sea bottom, this danger should be considered. Identifying labels will give adequate warning, but containers are more than likely to be found with caution labels washed off. Avoid direct contact and notify the U.S. Coast Guard of any sightings in U.S. coastal waters (**24 HOUR TOLL FREE NUMBER IS (800) 424-8802**), or government authorities of the nearest port state if sighting is near any foreign shores.

SUBMARINE CABLES AND PIPELINES

Submarine cables and pipelines pass beneath various navigable waterways of the U.S. and on the Continental Shelf. Installation of new submarine cables and pipelines is reported in the Local Notice to Mariners. Their locations may not be charted. Where feasible, warning signs are often erected to warn the mariner of their existence. In view of the serious consequences resulting from damage to submarine cables and pipelines, vessel operators should take special care when anchoring, fishing or engaging in underwater operations near areas where these cables or pipelines may exist or have been reported to exist. Certain cables carry high voltages; many pipelines carry natural gas under high pressure or petroleum products. Fire or explosion with injury or loss of life, or a serious pollution incident, could occur if they are breached. Vessels fouling a submarine cable or pipeline should attempt to clear without undue strain. Anchors or gear that cannot be cleared should be slipped; no attempt should be made to cut a cable or pipeline.

SUBMERGED OBJECTS IN SHALLOW WATERS

Mariners are cautioned against the hazard of snags and other submerged objects; particularly in shallow waters where even a small object may lie near the surface. Even in familiar waters, new obstacles may be encountered, and known obstacles may move. Good seamanship dictates low speed and alertness when transiting areas of shallow water.

MARINE CONSTRUCTION SITES

Information concerning marine construction projects involving dredging, breakwaters, piers, pipelines, oil drilling platforms, etc., is disseminated via Local and Broadcast Notices to Mariners when the Coast Guard is advised. Until these projects are completed, the sites are generally listed as displaying construction lights. This lighting serves both to light the site for purposes of construction and to warn the mariner of its existence. Barges and equipment operating in the area are usually held in place by mooring systems extending some distance from the equipment. Mariners should not rely on all this equipment or moorings being well marked, but should pass all such construction sites with caution. The Vessel Bridge to Bridge Radiotelephone Act and Federal Communications Commission (FCC) regulations require dredges and floating plants engaged in or near a channel or fairway, in operations likely to restrict or affect navigation of other vessels, to have a radiotelephone capable of operation from its navigational bridge or main control station and capable of transmitting and receiving VHF-FM Channel 13 (156.65 MHz).

HIGH-INTENSITY DECK WORKING LIGHTS

The U.S. Coast Guard and the Canadian Coast Guard have received numerous complaints from mariners that vessels are operating at night with their high-intensity deck working lights energized. The complaints generally involve large fishing vessels and scows transiting Puget Sound and adjacent waters, and the Canadian/Alaskan inside passage. The glare from these lights seriously impairs the night vision, if not the entire vision, of mariners on nearby vessels. In addition, their use can impair the visibility or distinctive character of required navigation lights, and may interfere with the keeping of a proper lookout. These lights should not be energized at night when other transiting vessels are or may be in the vicinity. In addition to posing a significant safety problem, the use of these lights at night near other vessels is a violation of Rule 20(b) of the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS). Violators risk potential legal action. In the event of a collision or other casualty, violators face possible financial liability (if bright working lights are found to have caused or contributed to the mishap).

DIVER'S FLAG

RULE 27(e)(ii) of the Navigation Rules - Inland and International states that small vessels restricted in their ability to maneuver and engaged in diving operations shall exhibit a rigid replica of the International Code Flag "A" (ALPHA) at least one meter in height. Many individuals and diving organizations have interpreted the International Code Flag "A" to mean that this has replaced the traditional diver's flag. This impression is incorrect. A vessel engaged in diving operations, whether underway or at anchor is usually considered restricted in its ability to maneuver if divers are attached to the vessel while diving. If divers are swimming free, it is the responsibility of the operator to determine if the vessel's movements are restricted by operations. If the vessel cannot keep out of the way of other vessels as required by the Navigation Rules, the vessel must exhibit, by day, the "A" flag. At night, such vessel must exhibit three lights is a vertical line, the highest and lowest being red and the middle one being white. If the operator of a vessel tending free-swimming divers feels that the diving itself does not restrict the maneuverability of the vessel, the "A" flag signal is not required.

CHAPTER XI

BRIDGE INFORMATION

BRIDGE INFORMATION

The Coast Guard is responsible for the locations and clearances of new or modified bridges and causeways, alteration of obstructive bridges, regulation of drawbridge operations, and prescription of navigational lighting for bridges. The Bridge Section of the Aids to Navigation and Waterways Management Branch administers the program for bridges over the navigable waters of the Thirteenth Coast Guard District. The Bridge Section may be contacted at (206) 220-7282 to report discrepancies or request information.

DRAWBRIDGE OPERATION

Drawbridges are required to open on signal for the passage of vessels unless otherwise regulated by the Coast Guard. Some drawbridges are regulated so that they need not open during periods of heavy vehicular usage to prevent land traffic congestion. Bridges also may operate with advance notice requirements where constant attendance by a bridge operator is not warranted due to infrequent vessel passages on a particular waterway. The Coast Guard may also authorize a deviation from normal operating procedures to accommodate repair work or a public event. Temporary deviations from normal operation are announced via Broadcast Notices to Mariners and/or the weekly Local Notice to Mariners. Drawbridge operation regulations, including proper signaling procedure, can be found in the current editions of 33 Code of Federal Regulations Part 117 (for all of the U.S.) and U.S. Coast Pilot 7 (for bridges in California, Oregon, Washington, and Hawaii only). The Code of Federal Regulations is available for sale from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 or any U.S. Government Bookstore. The Coast Pilot is available from retail outlets for charts and other nautical publications. These regulations may also be found on the internet at http://www.access.gpo.gov/nara/cfr/waisidx_00/33cfr117_00.html

VHF-FM CHANNEL 13

Channel 13 (156.650 MHz) is designated for use by vessels for communicating with drawbridges and locks. This channel is also the ship-to-ship channel for matters that concern vessel safety. Recreational boaters should use proper radio procedure as prescribed by the Federal Communications Commission. The Coast Guard has received complaints from commercial vessels that Channel 13 is being overloaded with needless conversation on the Lake Washington Ship Canal. We recommend that the use of Channel 13 in this area be avoided where and when sound signals will safely serve for requesting a drawspan to open. Vessels which intend to use Channel 13 while passing the locks and the bridges should monitor the channel until their transit is complete to avoid unnecessary repetition of transmissions to the locks and the bridges. Vessel operations are also reminded that their radios should be set to LOW POWER when transmitting on Channel 13.

BRIDGE PERMITS

Bridges across navigable waters of the United States are obstructions to navigation permitted only so long as they serve the needs of land transportation and provide for the reasonable needs of navigation. The Coast Guard requires that proposed construction or modification of bridges across navigable waterways be considered for approval by the Commandant or, where delegated, the District Commander. The factors under primary scrutiny are the location, alignment, pier placement, fender system, horizontal and vertical clearances, and any other aspect of the proposed project, which might affect navigation or the Coast Guard's responsibilities under the National Environmental Policy Act. Persons contemplating the construction of new bridges or the modification of existing ones should contact the Coast Guard to find out if a permit is necessary for the planned work. Certain works and waterways are exempt from permitting requirements. These inquiries should be made in writing and should include a map on which the location of the proposed crossing is clearly indicated on the subject waterway. For the purposes of our jurisdiction, "bridges" include pipelines, conveyers, and cable-held conveyances.

NOTE: Overhead and submarine power or communication cables are within the jurisdiction of the U.S. Army Corps of Engineers.

CHAPTER XII

CHARTS, PUBLICATIONS, AND TABLES

CHARTS

NAUTICAL CHARTS

Nautical charts are published primarily for the use of the mariner, but serve the public interest in many other ways. They are compiled principally from National Ocean Service (NOS) basic field surveys, supplemented by data from other government organizations. Nautical charts show the nature and shape of the coast, depths of water, general configuration and character of the bottom, prominent landmarks, port facilities, cultural details, aids to navigation, marine hazards, and other pertinent information for safe navigation. Changes brought about by people and nature require that nautical charts be constantly maintained and updated to aid safe navigation. Conventional and small-craft nautical charts vary in scale and format. For coastal navigation, boaters should use the largest scale chart available.

DEPTHS ON CHARTS

Depths are in feet, fathoms, or meters (below chart datum unless otherwise stated). The controlling depth of a channel is the least depth within the limits of the channel, it restricts the safe use of the channel to drafts less than that depth. The centerline controlling depth of a channel applies only to the channel centerline, lesser depths may exist in the remainder of the channel. The mid-channel controlling depth of a channel is the controlling depth of only the middle half of the channel. Federal Project Depth is the designed dredging depth of a channel constructed by the U.S. Army Corps of Engineers. The project depth may or may not be the goal of maintenance dredging after completion of the channel and, for this reason, project depth must not be confused with controlling depth. Depths alongside wharves usually have been reported by owners and/or operators of the waterfront facilities, and have not been verified by government surveys. Since these depths may be subject to change, local authorities should be consulted for the latest controlling depths. In general, the Coast Pilots give the project depths for deep-draft ship channels maintained by the Corps of Engineers. The latest controlling depths are usually shown on the charts and published in the USCG's Local Notice to Mariners and NIMA's Weekly Notice to Mariners. For other channels, the latest controlling depths available at the time of publication are given.

NAUTICAL CHART SYMBOLS AND ABBREVIATIONS - INFORMATION

Symbols and abbreviations approved for use on all regular nautical charts published by the Defense Mapping Agency Hydrographic/Topographic Center (DMAHTC) and the National Ocean Service (NOS) are contained in the latest edition of Chart Number 1, United States of America Nautical Chart Symbols and Abbreviations. The 10th Edition, November 1997, is latest edition of this publication which is available for download at: http://chartmaker.ncd.noaa.gov/mcd/chartno1.htm and maybe available in limited numbers from Government Printing Offices or authorized sales agents. The introduction to this publication includes a number of paragraphs on metric and fathom charts, chart modernization, soundings, drying heights, shorelines, landmarks, buoys, IALA buoyage, heights, conversion scales, traffic separation schemes, names, correction dates, and special foreign symbols. Buoys and beacons of the IALA Buoyage System Regions A and B are illustrated in the back of Chart No. 1, including light characteristics in full color. Section V lists abbreviations of principal foreign terms commonly used on charts. More information on unabbreviated foreign terms is provided in DMAHTC Sailing Directions. Identification of these terms is helpful to the chart user for many national languages are used beyond their country of origin; for example, Spanish in many Latin American countries and Portuguese in Brazil. Despite the improved presentation of foreign charting symbols in this section of Chart No. 1, certain reproductions of foreign charts published by DMAHTC may show symbols and abbreviations, and other distinctive features that differ from those illustrated. The mariner is warned that the buoyage systems, shapes, and colors used by other countries have a different significance than the U.S. system.

REPORTING CHART DEFICIENCIES

Mariners are requested to report all significant discrepancies in, and desirable additions to, NOS nautical charts; including depth information in privately maintained channels and basins; obstructions, wrecks, and other dangers; new landmarks or nonexistence/relocations of charted ones; uncharted private aids to navigation; and deletions or additions of small-craft facilities. All such reports should be sent to: Chief, Marine Chart Division (N/CS2), National Ocean Service, NOAA, Silver Spring, Maryland 20910-3282, or submit online at: http://critcorr.ncd.noaa.gov/dscreports/discrep.htm.

The date of a chart is of vital importance to the navigator. When charted information becomes obsolete, further use of the chart for navigation may be dangerous. Announcement of new editions of nautical charts are published in DMA's Weekly Notices to Mariners and the Coast Guard's Local Notices to Mariners. Certain charts reproduced by the United States, and foreign charts generally, may use symbols and abbreviations which differ from U.S. standards. The value of a nautical chart depends upon the accuracy of the surveys on which it is based. The chart reflects what was found by field surveys and what has been reported to NOS Headquarters. The chart represents general conditions at the time of surveys or reports, and does not necessarily portray present conditions.

SIGNIFICANT CHANGES MAY HAVE TAKEN PLACE SINCE THE DATE OF THE LAST SURVEY OR REPORT.

NATIONAL OCEAN SERVICE (NOS)

NOS provides charts and related publications for the safe navigation of marine and air commerce, and provides basic data for engineering and scientific purposes and other commercial and industrial needs. The principal facilities of NOS are located in Rockville, MD (headquarters); in Norfolk, VA (Atlantic Marine Center); and in Seattle, WA (Pacific Marine Center).

NOS CHART AND PUBLICATION ORDERS

New chart editions cancel former editions. They include corrections published in Weekly Notice to Mariners and Local Notice to Mariners through the Notice editions printed on each chart and important corrections from other sources. Mariners are warned against the use of obsolete charts as new editions contain information essential to safe navigation. The list below includes all authorized sales agents as 05 August 2002 as listed on the National Aeronautical Charting Office website http://www.naco.faa.gov/Agents.asp.

The National Ocean Service, NOAA, has a worldwide network of authorized nautical chart sales agents.
Some Nautical Agents also sell NIMA public sale nautical charts covering the entire world.
You may also order NOS and NIMA nautical products and catalogs directly from the FAA Distribution Division by mail, telephone, FAX, and e-mail:

Mail: FAA Distribution Division, AVN-530
National Aeronautical Charting Office
Riverdale, MD 20737-1199

Phone: (301) 436-8301
(800) 638-8972 toll free, U.S. only
Fax: (301) 436-6829
Email: 9-AMC-chartsales@faa.gov

AUTHORIZED NAUTICAL CHART SALES AGENTS

WASHINGTON

Location	Agent Name	Phone	Email/Fax
ANACORTES, WA	L F S ANACORTES	206-734-3336	
ANACORTES, WA	ANACORTES YACHT CHARTERS	206-293-4555	
ANACORTES, WA	CAP SANTE MARINE LTD	206-293-3145	
ANACORTES, WA	CARDINAL POINT NAVIGATION	360-293-8298	
ANACORTES, WA	WEST MARINE PRODUCTS 025	360-293-4262	360-293-6236 www.westmarine.com
ANACORTES, WA	MARINE SUPPLY & HARDWARE	360-293-3014	360-293-4014
ARLINGTON, WA	METRON AND ASSOCIATES INC	360-435-3777	
BAINBRIDGE ISLAND, WA	CHANDLERY	206-842-7245	206-842-9173
BELLEVUE, WA	BOATER'S WORLD #575	206-646-9350	
BELLEVUE, WA	WEST MARINE PRODUCTS 026	425-641-4065	425-641-9423 www.westmarine.com
BELLINGHAM, WA	BOATER'S WORLD #573	206-715-8304	
BELLINGHAM, WA	L F S INC	206-734-3336	206-734-4058
BELLINGHAM, WA	REDDEN MARINE SUPPLY INC	360-733-0250	360-671-1255
BELLINGHAM, WA	WEST MARINE PRODUCTS 028	360-650-1100	360-650-0911 www.westmarine.com
BLAINE, WA	SEMIAHMOO MARINA	360-371-5100	360-371-5631
BREMERTON, WA	WEST MARINE PRODUCTS 027	360-479-2200	360-479-2991 www.westmarine.com
EASTSOUND, WA	SHEARWATER ADVENTURES	360-376-4699	360-376-2005
EVERETT, WA	HARBOR MARINE MAINT & SPLY	206-259-3285	206-339-2403
EVERETT, WA	WEST MARINE PRODUCTS 029	425-303-1880	425-303-1448 www.westmarine.com
FERNDALE, WA	JOHNSON OUTDOORS	800-852-9257	360-366-2628 andyw@oceankayak.com
FRIDAY HARBOR, WA	KINGS MARINE CENTER	360-378-4593	360-378-3852
GIG HARBOR, WA	SHIP TO SHORE MARINE SUPPLY	253-858-6090	253-858-7104
ILWACO, WA	ENGLUND MARINE SPLY CO INC	503-642-2308	503-325-6421
KINGSTON, WA	KINGSTON NAUTICAL SUPPLY	360-297-3838	
LA CONNER, WA	BOATERS DISCOUNT CENTER	360-466-3540	
LOPEZ, WA	ISLANDS MARINE CENTER INC	206-468-3377	
OAK HARBOR, WA	CATALINA MARINE SERVICE INC	360-675-8828	360-675-2659

OLYMPIA, WA	U S MARINE SALES	360-455-0788	
OLYMPIA, WA	BOATER'S WORLD #572	360-754-1834	
OLYMPIA, WA	WEST MARINE PRODUCTS 531	360-352-1244	360-352-0961 www.westmarine.com
ORCAS, WA	WEST SOUND MARINA INC	360-376-2314	360-376-4634
PORT ANGELES, WA	R & R MARINE SUPPLY	360-452-7062	
PORT ANGELES, WA	PORT ANGELES MARINE SPLY	360-452-3277	
PORT TOWNSEND, WA	ADMIRAL SHIP SUPPLY	360-379-9921	
PORT TOWNSEND, WA	WEST MARINE PRODUCTS 181	360-379-1612	360-379-1902 www.westmarine.com
PORT TOWNSEND, WA	SPORT TOWNSEND	206-379-9711	
POULSBO, WA	PELAGOS MARINE SUPPLY	206-915-3126	206-954-4610
PT ROBERTS, WA	WESTWIND MARINE INC	360-945-5523	
SEATTLE, WA	CRAWFORD NAUTICAL SCHOOL	206-667-9377	
SEATTLE, WA	STARPATH SCHOOL OF NVGTN	206-783-1414	206-783-9209
SEATTLE, WA	CAPTAINS NAUT SPLYS	206-283-7242	206-281-4921 www.captainsnautical.com
SEATTLE, WA	ARMCHAIR SAILOR BKSTR	206-283-0858	206-285-1935 www.ArmchairSailorSeattle.com
SEATTLE, WA	DOC FREEMANS INC	206-633-1500	206-789-5800
SEATTLE, WA	FISHERIES SUPPLY CO	206-632-4462	
SEATTLE, WA	L F S INC	206-789-8110	
SEATTLE, WA	WEST MARINE PRODUCTS 023	206-789-4640	206-782-4565 www.westmarine.com
SEATTLE, WA	WEST MARINE PRODUCTS 022	206-292-8663	206-292-1055 www.westmarine.com
SEATTLE, WA	METSKER MAPS OF SEATTLE	206-623-8747	206-448-6270
SEQUIM, WA	BOSUN'S LOCKER D B A THREE MATES L L C	360-683-6521	425-883-6601
SHAW ISLAND, WA	BELLINGHAM CHART PRINTERS	360-468-3900	360-469-3939 www.tidesend.com
SPOKANE, WA	NW MAP & TRAVEL CENTER	509-455-6981	509-455-7544 www.nwmaps.com
SPOKANE, WA	WEST MARINE PRODUCTS 177	509-533-5532	509-533-5620 www.westmarine.com
TACOMA, WA	WEST MARINE PRODUCTS 024	253-926-2533	253-926-3287 www.westmarine.com
TACOMA, WA	MAPS & THINGS	253-474-6277	
TACOMA, WA	PUGET SOUND SAILING INST	253-383-1774	253-274-8703
TACOMA, WA	J & G MARINE SUPPLY	206-572-4217	253-627-1344
TACOMA, WA	BOATER'S WORLD #574	206-472-3393	
TUKWILA, WA	BOATER'S WORLD #571	206-575-1920	
VANCOUVER, WA	ARNOLD MAP SERVICE	360-695-7897	360-258-4360
WESTPORT, WA	ENGLUND MARINE SPLY CO INC	360-268-9311	360-268-9752

OREGON

Location	Agent Name	Phone	Email/Fax
ASTORIA, OR	ENGLUND MARINE SPLY CO INC	503-325-4341	503-325-0842
BROOKINGS, OR	CHETCO CHANDLERY LTD	503-469-6681	
BROOKINGS, OR	LORINGS LGHTHSE SPRT GOODS	503-469-2148	
CHARLESTON, OR	ENGLUND MARINE SPLY CO INC	541-888-6623	541-888-9332
CHARLESTON, OR	BASIN TACKLE SHOP	541-888-3811	
EUGENE, OR	LIBRA BOOKS INC /BOOK MARK	503-484-0512	bookmark@rio.com
NORTH BEND, OR	OREGON PACIFIC COMPANY	503-756-3121	
NEWPORT, OR	ENGLUND MARINE SPLY CO INC	541-265-9275	503-325-6421 www.englundmarine.com
NEWPORT, OR	SCHIEWE MARINE SUPPLY	541-265-7382	541-265-7382

PORT ORFORD, OR	DOCK TACKLE	541-332-8985	
PORTLAND, OR	WEST MARINE PRODUCT S 021	503-289-9822	503-289-0836 www.westmarine.com
PORTLAND, OR	RODGERS MARINE ELECTRONICS	503-287-1101	
PORTLAND, OR	ALDER CREEK KAYAK SPLY INC	503-285-0464	aldercreek@aldercreek.com www.aldercreek.com
PORTLAND, OR	CAPTAINS NAUT SPLY INC	503-227-1648	503-227-0168 kaptain@teleport.com
PORTLAND, OR	BOATER'S WORLD #200	508-978-1954	
PORTLAND, OR	FISHERMANS MARINE & OUTDR	503-283-0044	503-285-9461
TILLAMOOK, OR	TILLAMOOK SPORTING GOODS	503-842-4334	503-842-4439
WARREN, OR	D B A SCAPPOOSE BAY KAYAKING	503-397-2161	503-366-7157

IDAHO

Location	Agent Name	Phone	Email/Fax
BONNERS FERRY, ID	BONNERS BOOKS LTD	208-267-2622	
SANDPOINT, ID	HEN'S TOOTH STUDIO	208-263-3665	
TWIN FALLS, ID	PANG INC	208-435-9888	nplesich@yahoo.com

NATIONAL IMAGERY AND MAPPING AGENCY (NIMA)

The NIMA Hydrographic/Topographic Center (NIMAHTC) provides hydrographic, navigational, topographic, and geodetic data, charts, maps, and related products and services to the Armed Forces, other Federal agencies, the U.S. Merchant Marine and mariners in general. Publications include Sailing Directions (pilots), List of Lights, Table of Distances, Radio Navigational Aids, International Code of Signals, American Practical Navigator (Bowditch), and weekly Notices to Mariners. NIMA charts and publications are listed in the Hydrographic Regional Catalog, Volumes I through X.

DIGITAL CHART OF THE WORLD

The Digital Chart of the World (DCW) is a comprehensive 1:1,000,000-scale vector basemap of the world. It consists of cartographic, attribute, and textual data stored on compact disc read only memory (CD-ROM) with software that permits the database to be accessed, queried, and displayed on personal computers (PC). The primary source for the database is the NIMA Operational Navigation Chart (ONC) series. This is the largest scale unclassified map series in existence that provided consistent, continuous global coverage of essential basemap features.

The DCW database is based on the Vector Product Format (VPF) Military Standard (MILSTD60006) and the Vector Relational Format of the International Digital Geographic Exchange Standard (DIGEST). The DCW is described by Military Specification (MIL-D-89009). The database can be accessed directly from the four optical CD-ROM's that store the database or can be transferred to a magnetic media. The DCW is the first NIMA database to support geographic information system (GIS) applications. The DCW has worldwide coverage composed of four regions: Disc 1 - North America; Disc 2 - Europe and northern Asia; Disc 3 - South America, Africa, and Antarctica, Disc 4 - southern Asia and Australia. The database contains more than 1,500 megabytes of vector data and is organized into 17 thematic layers, including political boundaries and ocean coastlines, cities, transportation network, drainage, land cover, and elevation contours. The database also contains a worldwide index by place name with more than 1000,000 entries. The public sale price is $200.00 (available from U.S. Geological Survey).

Software

The software in the package, VPFVIEW, runs on a PC and operates with any VPF database. The software functions include display of geographic features for any area in the world; variations in color and symbols used in the display; zoom capability; hard copy print of the graphics used for the geographic features; saving data to a hard disc; and online display of the database structure and content.

USE OF THE METRIC SYSTEM ON NIMAHTC PRODUCTS

NIMAHTC is continuing a program to gradually convert the depths and heights on nautical charts and in publications to the metric system. Although many facsimile reproductions of foreign charts have shown depths and heights in meters for several years, DMAHTC originated charts began to show depths and heights in meters instead of fathoms and/or feet in January 1970. Depths are shown in meters (usually in meters and decimeters to 21 meters) and boldly stated in the chart title and in purple colored type in the outer chart borders. A conversion table from meters and decimeters to fathoms and feet is also carried on each chart.

GEOGRAPHIC NAME USAGE FOR NIMAHTC PRODUCTS

Whenever possible, names used on NIMAHTC charts and NIMA publications are in the form approved by the U.S. Board of Geographic Names. Generally, local official spellings are used for those features entirely within a single sovereignty, while names of countries and those features which are common to two or more countries, or which lie beyond single sovereignty, carry

Board-approved conventional spellings (i.e.: names in common American usage). When alternate names would be of value to the user, they may be shown for informational purposes within parentheses. Important individual name changes are made to all revised charts as the opportunity permits. Geographic names, or their spelling, do not necessarily reflect recognition of the political status of an area by the U.S. Government.

REPORTING DEPTH INFORMATION

The many ships presently equipped with reliable depth recorders constitute a potential wealth of sounding data desired by charting agencies for the purpose of confirming charted depths or charting heretofore unknown depths. While oceanographic survey vessels remain the primary source of bathymetric data, depth recordings submitted by Navy, Coast Guard, and merchant vessels make an important contribution to the vital task of charting the oceans.

Mariners are encouraged to obtain and report soundings whenever bridge routine and equipment capabilities allow. Chart 5103 and Pub. 606 depict bathymetric requirements and provide some guidance for observing and reporting sonic soundings. However, soundings must be correlated to positions and accompanied by supportive data such as:

1. Detailed position/time information.
2. Mariner's own evaluation of positional accuracy - type of navigational system used and frequency of fixes.
3. Ship's course and speed with times of changes noted.
4. Echogram scales in use, graduated scales provided, and time of scale changes.
5. Draft of vessel and if zero reference is corrected for draft.
6. Regular annotations of date/time marks on echograms to enable correlation with position.
7. Other related information considered appropriate.

An uncharted depth of 15 fathoms or less should be considered an urgent danger to navigation, and should be reported via radio without delay. Follow up with substantiating evidence, including the echogram, track chart and/or position log and all relevant navigational data and forward to NIMAHTC at the earliest opportunity. Charts submitted to amplify a sounding report will be replaced, on request, with a new chart, except that foreign charts will be replaced with the equivalent U.S. chart, if available. Data reports and charts should be sent to the NIDMA Hydrographic/Topographic Center (Code SDSCH), Bethesda, MD 20816-5001, either via mail or any U.S. Consulate.

PUBLICATIONS

COAST GUARD LOCAL NOTICES TO MARINERS (LNMs)

Mariners should rely on Local Notices to Mariners (LNM) as their primary source of information, with the Broadcast Notices to Mariners (BNM) providing information of such importance that it must be announced immediately. Once the information is published in the LNM usually it will not be included in a BNM. The LNM is published weekly; the first issue of each month is the Monthly Edition, which includes all of the sections of the LNM listed below and every note in its entirety. The remaining editions for the month are weekly supplement, which include one-line summaries of Section VII. Although individual articles refer to specific charts and/or publications, it is the responsibility of users to decide which of their charts and publications require correction. The following is a list and brief description of each section:

1. Section I. SPECIAL NOTICE contains information of a special nature that affects the marine environment. Articles such as DGPS and LORAN Off-air periods, lock closures, and changes in regulations pertaining to pilotage and other marine related regulations will be contained in this section. It may also contain notices of dredging.

2. Section II. DISCREPANCIES - DISCREPANCIES CORRECTED contains a tabulation of all discrepancies in aids to navigation and those which have been corrected from the last published list.

3. Section III. TEMPORARY CHANGES - TEMPORARY CHANGES CORRECTED contains information similar to Section II but which is of a temporary nature such as relocating aids for dredging operations or a temporary buoy replacing a destroyed structure or missing buoy.

4. Section IV. CHART CORRECTIONS lists all corrections to Federal and privately maintained aids to navigation, as well as NOS chart corrections. This section is the heart of the Local Notice to Mariners. Each chart will be listed separately, in ascending order. Thus, a single correction might appear several times; once for each chart covering the affected area. An explanation of the format of the Chart Correction Section will be in each issue of the LNM.

5. Section V. ADVANCE NOTICE OF CHANGES IN AIDS TO NAVIGATION contains advance notice of approved projects which are scheduled for a certain date of accomplishment.

6. Section VI. PROPOSED CHANGES IN AIDS TO NAVIGATION contains notices of projects conceived and in the planning stage, but which have not been approved or scheduled for accomplishment.

7. Section VII. GENERAL contains information on new publications, channel conditions, obstructions, dangers, salvage operations, bridges, regattas, and other items of general concern to the maritime community

8. Section VIII. CORRECTIONS TO LIGHT LIST, VOLUME VI; PACIFIC COAST AND PACIFIC ISLANDS contains all of the corrections to the Thirteenth Coast Guard District's Aids to Navigation that are included in the Light List

9. Section IX. ADDITIONAL ENCLOSURES contains items such as tabulations, chartlets, public notices, and other pre-printed material.

AVAILABILITY OF THE LOCAL NOTICE TO MARINERS

The Thirteenth Coast Guard District Local Notice to Mariners (LNM) is a free publication. By making it readily available, a marina says it cares about the safety of customers. You may be put on the LNM mailing list by sending a request to the address on the back of this booklet or by calling (206) 220-7270. The LNM is also available via the internet at: http://www.navcen.uscg.gov/lnm/d13/. You will be provided a copy every week year round if the mailing list verification in LNM 45 is returned. The Local Notice to Mariners (LNM) and Broadcast Notices to Mariners (BNM) are the primary means the Coast Guard has for passing important information concerning navigation safety.

NIMA WEEKLY NOTICE TO MARINERS

Subscriptions are limited to bona fide mariners who, when submitting requests, must include a sound justification for the worldwide coverage provided by this publication. The Notice to Mariners is issued free of charge, however, subscribers outside the continental United States must pay for shipping costs.

NIMA SUMMARY OF CORRECTIONS

Weekly Notice to Mariners chart and publication corrections are compiled in the Summary of Corrections published by NIMA. Those corrections effective since 5 July 1975 are included in Volume 4 of the Summary of Corrections. All corrections subsequent to that date which remains effective, appear in each issue. The Summary of Corrections, Volume 5, contains corrections for World and Ocean Basin Charts, U.S. Coast Pilots, Sailing Directions, Fleet Guides, and other miscellaneous publications. Each volume is published semiannually and may be purchased individually or on an annual subscription basis.

AUTOMATED NOTICE TO MARINERS

The National Imagery and Mapping Hydrographic/Topographic Center (NIMAHTC) provides a computer accessed service as a source of up-to-date marine information for the user, called the Automated Notice to Mariners System (ANMS). The ANMS contains the data used to produce the Weekly Notice to Mariners publication and other information of use to the mariner. The ANMS currently contains information on Chart Corrections, Broadcast Warnings, MARAD Advisories, National Imagery and Mapping Agency (NIMA) List of Lights, Anti-Shipping Activities, Oil Drill Rig Locations, corrections to NIMA Hydrographic Product Catalogs, and U.S. Coast Guard Light Lists, as well as a 'mail box' for communications with NIMA. ANMS is accessed through the Navigation Information Network (NAVINFONET). NAVINFONET is made up of commercial telephone lines, satellite links, and other commercial communication services. ANMS should not be used as a replacement for the Weekly Notice to Mariners or the Local Notice to Mariners. To gain access to the ANMS, permission must be granted and a user identification code assigned, this may be done by writing NIMA at: NIMA Hydrographic/Topographic Center, Navigation Division, ATTN: NAVINFONET Staff, Stop D-44, 46 Sangamore Road, Bethesda, MD 20816-5003. For more information call (800) 826-0342.

NEW EDITION OF NAVINFONET USERS MANUAL

A new edition of the Navigation Information Network (NAVINFONET) Users Manual, 1993 edition, is available from NIMA. It describes procedures for public access to NAVINFONET.

NAVINFONET provides Chart Corrections, Broadcast Warnings, Maritime Administration (MARAR) Advisories, NIMA List of Lights, Anti-Shipping Activity Messages (ASA,), Mobile Offshore Drilling Unit (MODU) Locations, NIMA Hydrographic Catalog Corrections, U.S. Coast Guard Light List, and Global Positioning System (GPS) Data. NAVINFONET can be accessed through commercial telephone lines (including cellular links), satellite links, and commercially available computer communications hardware and software. Copies of the manual may be obtained free of charge by mailing a request to: NAVINFONET Staff, Stop D-44, 46 Sangamore Road, Bethesda, MD 20816-5003.

NOS COAST PILOTS

The National Ocean Service Coast Pilot is a series of nine nautical books that cover a wide variety of information important to navigators of U.S. coastal and intracoastal waters, and the waters of the Great Lakes. Most of this book information cannot be shown graphically on the standard nautical charts and is not readily available elsewhere. The subjects in the Coast Pilot include, but are not limited to: Channel descriptions, anchorages, bridge and cable clearances, currents, tide and water levels, prominent features, pilotage, towage, weather, ice conditions, wharf descriptions, dangers, routes, traffic separation schemes, small craft facilities, and Federal regulations applicable to navigation. Changes to the Coast Pilot that affect the safety of navigation and are reported to NOS in the interim period between editions are published in the Local and Weekly Notices to Mariners.

NOTE: Coast Pilot 7, Pacific Coast: California, Oregon, Washington, and Hawaii, should be purchased by anyone transiting the Pacific Coast or Pacific Islands.

NOS TIDE TABLES

Tide Tables are issued annually by NOS in advance of the year for which they are prepared. These tables include predicted times and heights of high and low water for every day in the year for a number of reference stations, and differences for obtaining similar predictions for other places. Tide Tables also include other useful information such as a method of obtaining heights of tide at any time, local mean time of sunrise and sunset for various latitudes, reduction of local mean time to standard time, and time of moonrise and moonset for various ports.

NOS TIDAL CURRENT TABLES

Tidal Current Tables for the coast of the United States are issued annually by NOS in advance of the year for which they are prepared. These tables include daily predictions of the times of slack water and the times and velocities of flood and ebb currents for a number of waterways; together with differences for obtaining predictions for other places. They also include information on methods for obtaining the velocity of current at any time, duration of slack, coastal currents, wind currents, combination of currents, and current diagrams. Information on the Gulf Stream is included in the tables for the Atlantic coast.

OTHER GOVERNMENT PUBLICATIONS FOR THE MARITIME COMMUNITY

The following lists some of the more popular Government publications available for the maritime consumer. The publications are grouped according to the source from which they may be ordered. Many are free. If there is a charge for the publication, the entry will show the cost at the time this Special Notice was written. If possible, verify the current price with the source before ordering.

For more information on the following publications call: (800) 368-5647.

1. BOATING SAFETY CIRCULARS. A periodic newsletter that covers safety topics of interest to boat manufacturers, dealers, boat owners, and boating educators and writers.
2. FEDERAL REQUIREMENTS FOR RECREATIONAL BOATS. A booklet for the boat operator that explains Coast Guard boating regulations and equipment requirements.
3. THIS IS THE SEAL OF SAFETY - GET A FREE CME. A pamphlet describing the Coast Guard Auxiliary Courtesy Marine Examination (CME) - a free safety check of your boat's safety equipment.
4. MODIFICATIONS. A pamphlet that explains the coloring scheme for channel buoys and navigation markings.
5. ISUAL DISTRESS SIGNALS. A pamphlet describing the different types of distress signals for recreational boats and the water on which they are required.
6. JOIN THE COAST GUARD AUXILIARY. A pamphlet outlining the activities of the U.S. Coast Guard Auxiliary and the basic eligibility requirements for membership.
7. SHIPSHAPE IS FIRE SAFE. A pamphlet that describes precautions a boater can take to avoid fires and explosions on recreational boats.
8. BOATING SAFETY HOTLINE. A brochure the describes the services available to recreational boaters on the Coast Guard's Boating Safety Hotline (800) 368-5647.

The following are textbooks used in Coast Guard Auxiliary public education courses. Boaters are encouraged to get the textbooks by taking the courses (same as the title). Class prices vary from $15.00 to $70.00. You can find out when the courses will be given in your area by calling toll-free (800) 336-2628. The text books may be ordered from: Coast Guard Auxiliary National Board, Inc., 9949 Watson Industrial Park, St. Louis, MO 63126.

1. BOATING SKILLS & SEAMANSHIP. Text covers boating laws and regulations, boat handling, navigation rules, and much more.
2. SAILING AND SEAMANSHIP. Same basic text as above, except that it is geared more for sailboats.
3. ADVANCED COASTAL PILOTING. A basic navigation text for the small boat owner. It explains how to read charts, plot courses, predict tides, use electronic navigation aids, etc.

The following is a correspondence course that may be obtained from: U.S. Government Bookstore, World Savings Building, 720 N. Main Street, Pueblo, CO 81003 or by calling (719) 544-3142.

1. THE SKIPPER'S COURSE. A correspondence course in recreational boating safety.

The following publications are available by writing the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20401, (202) 512-0132:

1. NAVIGATION RULES, INTERNATIONAL AND INLAND (COMDTINST M16672.2D). Contains requirements for navigation lights, shapes, sound signals, and maneuvering rules that must be followed by U.S. vessels navigating the high seas and U.S. inland waters. This book is required by law to be carried on vessels (both commercial and recreational) 12 meters (39.4') or more in length. Cost: $14.50.
2. LIGHT LISTS. A comprehensive listing of the official names, locations, and characteristics of all aids to navigation maintained by the U.S. Coast Guard (in seven volumes). Cost varies per volume, Vol VI: $32.00.
3. NAUTICAL ALMANAC. Contains astronomical data used by navigators in celestial navigation. Cost: $40.00.

CANADIAN CHARTS

Canadian nautical charts and publications are available from the Canadian Hydrographic Service and authorized dealers. Payment for mail order must be made in advance, by money order or bankable remittance, payable (in Canadian funds) to the Receiver General for Canada and sent to:

Canadian Hydrographic Service
Department of Fisheries and Oceans
ATTN: Customer Sales Department
Institute of Ocean Sciences, Patricia Bay
9860 West Saanich Road, P.O. Box 6000
Sidney, B.C. V8L 4B2
Telephone (250) 363-6358
Telex 049-7281
Telefax (250) 363-6841

Material delivered in conformity with an order is not returnable for exchange or refund. The Canadian Hydrographic Service produces and distributes nautical charts, sailing directions and tide tables of the navigable waters of Canada Nautical charts are a necessity for safe navigation and a requirement for commercial navigation under the Canada Shipping Act. Furthermore, the necessity of having up-to-date charts showing the latest information cannot be stressed too strongly, therefore purchasers should correct their own charts from the Weekly Notices to Mariners and obtain New Editions as soon as they are advertised. The Hydrographic Service corrects all charts up to the date of sale, with the exception of those published primarily for small-craft use. Although charts contain a wealth of information, certain details of importance to navigation cannot be included. Such details are given in Sailing Directions which describe the coast, conspicuous landmarks and provide other information such as availability of fuel, berthing facilities, etc. Other related publications provide information concerning tides, water levels, aids to navigation, nautical regulations, etc.

The Canadian Hydrographic Service carries out surveys in Canada's coastal and inland waters for the production of new charts and to improve existing charts and publications. Mariners can assist by notifying the Director, Hydrography, Pacific Region, Canadian Hydrographic Service, Department of Fisheries and Oceans, Sidney, British Columbia, Canada, V8L 4B2, when uncharted dangers to navigation are discovered, or any discrepancies are noticed in any publications.

CANADIAN NAUTICAL CHART CATALOGUE

For a complete listing of Canadian nautical charts and related publications, refer to the "Catalogue of Nautical Charts and Related Publications 2, Pacific Coast". This publication is free of charge from the Canadian Hydrographic Service listed above.

CANADIAN NAUTICAL PUBLICATIONS

These publications are of particular importance to mariners and may be obtained from the Hydrographic Chart Distribution Office and authorized dealers. Below is a partial list.

1. SAILING DIRECTIONS

    a. British Columbia Coast (South Portion), Volume I. Comprising southern portion of the Coast of British Columbia, from Cape Caution south to, and including, both sides of Juan de Fuca Strait, together with Vancouver Island and the inner passages which separate it from the mainland.
    b. British Columbia Coast (North Portion), Volume II. Comprising northern portion of the Coast of British Columbia, including the Coast of British Columbia from Cape Caution to Portland Inlet, and the southern Coast of Alaska, together with Queen Charlotte Island.
    c. British Columbia Small Craft Guide, Volume 1. Contains a description of the west and east coasts of the southern portion of Vancouver Island between Port Alberni to Campbell River, including the Gulf Islands and the passages between them.
    d. British Columbia Small Craft Guide, Volume 2. Contains a description of the coast of British Columbia mainland between Boundary Bay and Cortes Island, including Texada and Lasqueti Island.

2. CANADIAN TIDE & CURRENT TABLES. The following are annual publications which contain daily tide predictions for all Canadian reference ports along with tidal differences for secondary ports. Daily current predictions are also included for selected current stations.

    a. Volume 5 - Juan de Fuca and Georgia Straits
    b. Volume 6 - Barkley Sound and Discovery Passage to Dixon Entrance
    c. Volume 5 & 6 - Pacific Coast - combined edition Tidal Current Atlases
    d. Atlas of Tidal Current Charts, Vancouver, B.C. - contains charts for hourly stages of the current

e. Atlas of Tidal Current Charts, Yuculta Rapids, Cordero Channel, B. C. (Tidal Current Publication No. 23)
f. Current Atlas, Juan de Fuca Strait to Strait of Georgia

3. LIST OF LIGHTS, BUOYS, AND FOG SIGNALS - published annually. Pacific Coast and the rivers and lakes of British Columbia Inland waters

4. RADIO PUBLICATIONS. Pacific Radio Aids to Marine Navigation (Pacific) - published annually Radiotelephone Operators Handbook - land/sea/air

5. NOTICES TO MARINERS. Canadian "Notices to Mariners", published weekly, contain important navigational information including amendments to Canadian Charts, Sailing Directions, Lists of Lights and Lists of Radio Aids. These "Notices" may be obtained free on request to the Director, Marine Navigation Services, Canadian Coast Guard, Ministry of Transport, Ottawa, K1A ON7. The collectors of Customs and Excise, the Marine Agents of the Ministry of Transportation in Canada and dealers for Canadian charts exhibit reference copies of "Notices to Mariners" in their offices. In addition to the weekly publication one should obtain a copy of the annual edition called "Notice to Mariners 1", which contains a wealth of information concerning navigation safety in Canada. This annual publication is very much on the same lines as the U.S. Coast Guard's Special Notice to Mariners and is invaluable for those transiting Canadian waters.

TRAFFIC SEPARATION SCHEME MODIFICATIONS
Strait of Juan de Fuca, Puget Sound, Haro Strait, Boundarey Pass, and Strait of Georgia

A Notice of Proposed Rulemaking (NRPM) concerning modifications to the traffic separation schemes (TSSs), in the Straits of Juan De Fuca, Puget Sound, Haro Strait, Boundary Pass, and the Straits of Georgia, was published in the Federal Register, Volume 67, Number 166 on 27 August 2002. The modifications are tentatively scheduled to take affect 01 December 2002. Below is the summary of the NPRM and the proposed changes. To see the complete document go the following website: http://www.access.gpo.gov/nara/.

The Coast Guard proposes to amend the existing (TSSs) in the Strait of Juan de Fuca and its approaches, in Puget Sound and its approaches, and in Haro Strait, Boundary Pass, and the Strait of Georgia. The proposed amendments have been approved by the IMO and have been validated by a recent Port Access Route Study. Implementing these amendments would provide better routing order and predictability, increase maritime safety, and reduce the potential for collisions, groundings, and hazardous cargo spills. This rulemaking would incorporate these TSSs, as amended, into the Code of Federal Regulations

The Port Access Route Study concluded that the current TSSs should be modified by:

1. Reconfiguring and extending seaward the TSS at the entrance to the Strait of Juan de Fuca.

All traffic entering the Strait of Juan de Fuca is presently funneled into the Strait through one of two short traffic lanes. The inbound traffic lane originating from the southwest may bring traffic within 1 mile of Duntze Rock. This convergence near Buoy Juliet is close to the rocky shoreline of Cape Flattery, lies within the Olympic Coast National Marine Sanctuary, and funnels inbound southern traffic along the northern and western borders of an existing Area To Be Avoided (ATBA). It is customary for a large percentage of the slower moving traffic, often tugs and barges and small fishing vessels, to transit inbound and outbound south of the designated traffic lanes when on coastwise voyages to and from the south. This practice eliminates the need for slower moving southbound traffic to cross the traffic lanes and the numerous overtaking situations arising from disparate transit speeds. However, under the present configuration, this traffic is forced to transit extremely close to Duntze Rock and may end up infringing on either the ATBA or the inbound traffic lane.

Traditional commercial and sports fishing areas are in and adjacent to the traffic lanes at the entrance to the Strait. Occasionally, fishing vessels in the area create a conflict for vessels following the TSS, particularly during periods of reduced visibility.

This rulemaking would extend the TSS at the entrance of the Strait of Juan de Fuca approximately 10 miles farther offshore and would center the separation zone on the international border at the entrance. Both of these actions would create a ``buffer zone'' between the southernmost TSS lane and Duntze Rock and the nearby ATBA. This relocation provides significant sea room for resolving conflicting routes as vessels converge toward the entrance of the Strait, thereby improving order and predictability for all entry and exit lanes. These changes, along with changes being proposed for the ATBA boundary, would allow sufficient room for slower moving vessels to transit without conflicting with inbound traffic steering for the southern approach to the TSS. It would also provide a greater margin of safety around the hazards of Duntze Rock and Tatoosh Island. Finally, it would create the space necessary to accommodate the recommended routes proposed to IMO.

In developing these proposed changes to the TSS, we considered the location of the traditional fishing grounds off the entrance to the Strait of Juan de Fuca. Although it was not possible to completely segregate the TSS from the fishing grounds, the recommended changes would minimize potential conflicts and improve the existing configuration. These recommendations would provide routing order and predictability farther offshore, thereby reducing conflicts between vessels following the TSS and vessels fishing at the entrance to the Strait.

2. Modifying the location, orientation, and dimensions of the existing TSS in the Strait of Juan de Fuca.

In its current configuration, over two-thirds of the TSS is located on the United States side of the International Boundary. The separation zone flares to a maximum width of approximately four nautical miles, of which three nautical miles are in U.S. waters. This alignment of the TSS reduces the amount of navigable water available to vessels transiting, outbound or inbound, south of the TSS and places inbound traffic following the lanes closer to land than vessels transiting in the outbound lanes.

In the western segment of the TSS, the proposed rule would shift the TSS a half-mile to the north and reduce the width of the entire separation zone to a maximum of 3 nautical miles. The minimum width of the separation zone and the width of the traffic lanes would remain one nautical mile. Doing so would reduce the potential for powered groundings on the U.S. shoreline by creating a larger buffer between the TSS and shore. It also would create additional space for the existing in-shore traffic that transits south of the TSS and would accommodate the recommended routes proposed to IMO.

Exercises in the existing Canadian Practice Firing Range (Exercise Area WH).will continue to be conducted in a manner not to conflict with commercial traffic following the TSS.

3. Relocating the Pilot Area and reconfiguring the traffic lanes and precautionary area off Port Angeles to improve traffic flow and reduce risks.

Five TSSs converge at the precautionary areas (``PA'' and ``ND'') located to the north and east of Port Angeles. Ferries, recreational vessels, piloted deep draft vessels, non-piloted deep draft vessels, tugs and tows, naval vessels, and large and small commercial fishing vessels all interact and compete for space at this convergence point in the traffic scheme. The present traffic

configuration was designed primarily to deliver inbound vessels to the pilot stations located at Port Angeles and Victoria. The impact on vessel safety or other waterway users may have been overshadowed. For example, the present configuration does not separate the Port Angeles pilots boarding area from either the through traffic following the TSS or the traffic choosing to follow the informal inshore traffic lanes. The current TSS routing leading to the Port Angeles pilot station has been identified through casualty histories as a substantial cause for concern. Vessels bound for the Port Angeles pilots station are required by the TSS to steer almost directly on Ediz Hook. To pick up a pilot, a vessel must first execute a 60-degree turn, then slow to varying speeds, which creates different impacts on steerage. At this point, a vessel may be particularly vulnerable to currents and seas. If an engineering failure occurred during this operation, the vessel would be
at risk of a drift or powered grounding on Ediz Hook. By changing the traffic lane leading to the pilot station and by relocating the station itself, the need for an incoming deep draft vessel to steer directly toward shoal water as it approaches the pilot station would be eliminated. The addition of a new east/west TSS leading east from precautionary area ``PA'' establishes a predictable route for those vessels that do not require pilotage thus reducing the risk of collision with vessels that are maneuvering to pick up a pilot.

4. Moving the vessel traffic lanes southeast of Victoria, British Columbia, farther off shore.

On the Canadian side of the international boundary, outbound tugs and barges exit the TSS at Discovery Island and head directly for the inshore routes south of Race Rocks, cutting across the inbound and outbound TSS lanes south of Victoria. Outbound fishing vessels exiting Baynes Channel or passing east of Discovery Island attempt to stay north of the TSS but often infringe upon the lanes near Trial Island, Discovery Island, and the pilot station. This behavior creates unnecessary and potentially dangerous interactions between deep draft vessels following the TSS and smaller vessels that choose to skirt the TSS or cut diagonally across the TSS.

The proposed change would create an inshore buffer by decreasing the width of the TSS leading from the Victoria Pilot Station to the turn south of Discovery Island while maintaining the same southern boundary on the inbound lane. This buffer zone would allow fishing vessels and other small, slow moving vessels to transit directly between Discovery Island and Race Rocks, then inshore north of the TSS, while avoiding the deep-draft TSS.

5. Establishing precautionary areas off Discovery Island and around the Victoria Pilot Station.

The Victoria Pilot Station is at the convergence of two TSSs where there is significant traffic congestion as vessels transit to and from the ports of Victoria and Esquimault. Likewise, two TSSs converge off Discovery Island where vessels often enter or depart the traffic scheme. Both of these are areas where vessels should proceed with particular caution. The proposed rule addresses this by proposing to establish precautionary areas ``V'' and ``HS.''

6. Creating a new two-way route in Haro Strait and Boundary Pass and establishing a precautionary area off Turn Point.

There are currently no formal traffic lanes in Haro Strait and Boundary Pass. In recent years, the level of recreational boating has significantly increased. There has also been an explosive growth in the number of small commercial vessels providing whale-watching tours off the western shore of San Juan Island. With this growth have come increased conflicts with deep draft vessels.

Turn Point is one of the more navigationally challenging areas of Haro Strait and Boundary Pass. Transiting vessels must negotiate a blind right-angle turn at varying distances from shore depending on their direction of travel and the presence of strong currents. In addition, numerous secondary channels and passages route traffic into Haro Strait in the vicinity of Turn Point.

This proposed rule would establish a two-way route in Haro Strait and Boundary Pass that connects into two existing TSSs to the south. This would increase order and predictability for vessel traffic in these waters. By establishing a formal traffic route, the provisions of Rule 10 of the COLREGS would apply. This would reduce dangerous interactions between the deep draft vessels following the TSS and smaller vessels that choose not to follow the TSS. The edge of the traffic lane would be moved to the east from Kellet Bluff to Turn Point and a flair or pull out would be created south of Turn Point to provide maneuvering room for a vessel to safely negotiate the strong ebb currents. A precautionary area around Turn Point is being proposed for this navigationally challenging area where vessels must negotiate a sight-obscured, right-angle turn in the presence of strong currents and numerous small craft.

7. Expanding precautionary area ``RB'' at the south end of Rosario Strait.

Deep draft vessels often cannot precisely follow the existing TSS when approaching Rosario Strait from the south. Strong currents make it impossible for vessels to avoid the separation zone as they negotiate the slight turns in the TSS just south of precautionary area ``RB''. The small turns in the TSS approaching precautionary area ``RB'' could not be eliminated without placing the TSS uncomfortably close to other shoal water.

This proposed rule would replace a small portion of the existing traffic lane with an expansion of precautionary area ``RB''. The safety of deep draft transits would be enhanced by eliminating a routing measure that large ships cannot comply with and replacing it with a precautionary area where ships must navigate with particular caution.

8. Revising and aligning the existing TSS in Georgia Strait with the exiting TSS north of Rosario Strait and linking them with a new precautionary area off East Point.

There is presently no routing measure connecting the TSS that terminates off Patos Island with the TSS that terminates off Saturna Island. Furthermore, these two TSSs are not aligned. Traffic exiting the Strait of Georgia bound for Rosario Strait follows the TSS to its termination before angling back to the north to enter the TSS at Patos Island. Routing vessels in this manner crowds them and creates a possible conflict with traffic southbound for Boundary Pass. Finally there is no precautionary area in the vicinity of East Point, where traffic merges from several directions.

This proposed rule would create a seamless and logical traffic scheme for this area. Existing TSSs are aligned and connected to the new two-way route in Boundary Pass through the creation of a new precautionary area. By providing a contiguous TSS that connects the new Boundary Pass traffic lane with the existing or modified TSS in the Strait of Georgia and by establishing a contiguous TSS connecting the old Patos Island TSS and the Georgia Strait TSS, traffic bound for Rosario Strait could follow the TSS without impeding traffic southbound for Boundary Pass. The new precautionary area would highlight the need for potential crossing traffic in this area to exercise caution and would provide oil tankers departing Cherry Point bound for Haro Strait with a predictable and safe location to enter the traffic scheme.

9. Creating a new precautionary area in Georgia Strait west of Delta Port and the Tsawwassen Ferry Terminal.

The recently completed container facility at Delta Port has significantly increased the volume of traffic entering and departing the TSS in the Strait of Georgia. There has also been a significant increase in traffic to and from the Tsawwassen Ferry Terminal. A new precautionary area southwest of Delta Port would accommodate vessels departing Delta Port and the Tsawwassen Ferry Terminal as they get up to maneuvering speed before and while entering the TSS.

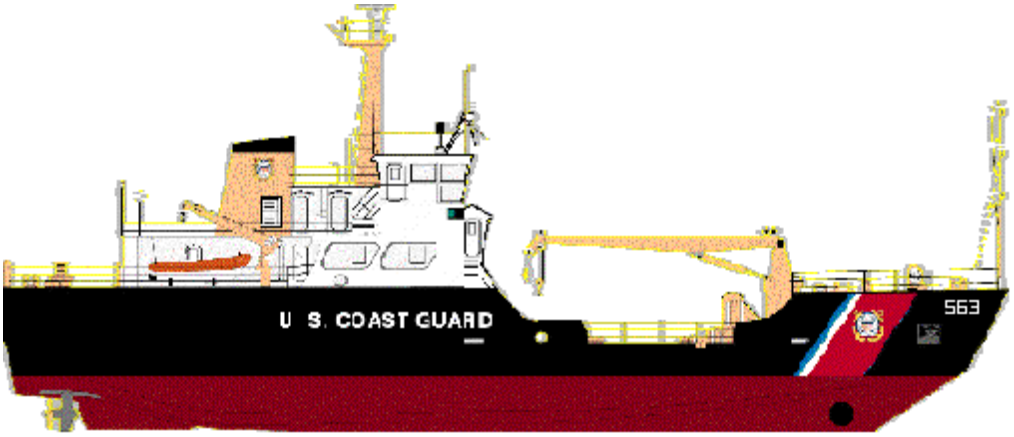
TOWLANE CHARTS

For over 29 years West Coast tug and barge operators have benefited from a cooperative agreement with commercial fishermen in keeping towlanes free of crab gear. The crabber/towboat lane negotiation process has provided designated towlanes from Cape Flattery to San Francisco, giving towboaters a clear lane to operate and crab fishermen areas free of tug and barge traffic. Through efforts by the Sea Grant programs on the West Coast, an agreement was reached between fishermen and tug operators on areas where crab gear would not be ser, providing these lanes for tug and barge traffic. During its 29 years existence, the Crabber/Towboat Lane Negotiation Project has save millions of dollars in gear and vessel repair costs for both user groups.

Washington Sea Grant took the lead in this voluntary industry program in 1997, working with West Coast commercial crab fishers and towboat operators to continue this critical effort. The 2001 edition of the Towlane Charts is a result of discussions and final agreements between the two groups over a twelve-moth period.

For more information or copies of the Towlane charts contact Steve Harbell, Marine Field Agent, Washington Sea Grant, at (360) 875-9331.

USCGC HENRY BLAKE (WLM 563)
KEEPER CLASS COASTAL BUOY TENDER



United States Coast Guard Cutter HENRY BLAKE is the thirteenth of the Keeper Class of the Coastal Buoy Tenders. The Keeper Class is made up of 14 technically advanced and highly capable buoy tenders. Automated engineering controls and computer-based navigation and communications systems will assist her small crew in servicing aids to navigation. Constructed by Marinette Marine Corporation in Marinette, Wisconsin. HENRY BLAKE was placed in Commis sion, Special on the 18th of May 2000 and began her journey of over 9,400 nautical miles over a six month period which included port calls in 4 countries and 11 states on her way to her home port in Everett, Washington, which she arrived at on the 14th of September 2000. A land based cutter support team (CST) of eight additional personnel will augment HENRY BLAKE's crew of 20. With billions of dollars worth of cargo that is transported annually through the Puget Sound and San Juan Island area, HENRY BLAKE and her crew have thee critical task of ensuring the waterways in this environmentally sensitive area are safe for navigation. HENRY BLAKE is responsible for the maintenance of 80 lighted, 39 unlighted, and 65 shore aids to navigation. Additionally, HENRY BLAKE will perform other Coast Guard missions that include Search and Rescue, Maritime Law Enforcement and Marine Environmental Protection.

HENRY BLAKE (1837-1871)

From the beginning of the settlement of families in the Washington Territory, there were stories told of shipwrecks, wailing gulls seeking refuge from harsh storms and lonely lighthouse keepers. Most stories, especially those of the keepers, were based on true accounts. The keepers in the extreme northwest had to courageously deal with treacherous winds and rough seas. One such lighthouse was New Dungeness, located at Washington's Olympic Peninsula.

New Dungeness was first lit on December 14, 1857, making it the first lighthouse to be lit in the Strait of Juan De Fuca. The lighthouse was 90 feet tall with a winding stairwell to the top. Kerosene was used for the light and it had a large bell for a fog signal. Even with the light and fog bell, the spit had a history of shipwrecks. These included the barque Christopher Mitchell, the Washington Libby, the R.K. Ham and the steamer Sioux.

On March 1, 1858, Henry Blake of England became the first Keeper of the New Dungeness Lighthouse. This duty post was a dreary and lonely one. Life would smile on him after he met the daughter of prospector, John McDonnell, of New Orleans. Later the two would marry and have five children.

One September night in 1868, the Blake family witnessed a terrible event. Through their telescope they were shocked to see a brutal attack on a small band of a Vancouver Island Tribe, the Tsinshians, by a tribe that lived near New Dungeness, the S'Klallam Tribe. The family heard screams and saw the local tribe hacking through the camp of the Tsinshians who had set up tents for the night. Henry Blake rushed to the scene only to return with disappointing reports of no survivors. Later, they discovered that the report was not all true. During the early morning they heard a knock on the downstairs storeroom door. They found a young pregnant girl severely cut and bleeding. She had been slashed several times in the abdomen and has hanging on to dear life. Courageously, she

made her way through water, sand, seaweed and silt to find her way to the lighthouse. The Blakes nursed the girl back to good health.

The New Dungeness Lighthouse proved to be one off the most significant to this country. Whether it was because of the dangerous waters that it watched of the historical battles that took place on it's soil, it is only fitting that the first to keep this light was a brave and compassionate person such as Henry Blake.

MISSIONS

Aids to Navigation

Marine Environmental Protection

Search and Rescue

PRINCIPAL CHARACTERISTICS

Length	175 Feet
Beam	36 Feet
Draft (Full Load)	8 Feet 5 Inches
Displacement (Full Load)	840 Long Tons
Speed	12 Knots
Buoy Deck Area	1,335 Square Feet
Officers	2
Enlisted	18
Cutter Support Team (CST)	8

EQUIPMENT

Main Engines	2 CAT 3508, 999 BHP @ 1600 RPM
Propulsion	2 Ulstein 1350h 360 Steerable Z-Drives
Thruster	500 HP/DC fixed pitch
Power Generators	3 CAT 3406 285 KW each
Crane	10-ton hydraulic, 42-foot boom

NOTICE TO MARINERS
MARINE INFORMATION, REPORT AND SUGGESTION SHEET

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NOTES